Sucrose synthase p Eucalyptus grandis Eucalyptus grandis Plasmodium falcipa

Fibrin gel binding Proteoglycan bindi NCAM, heparin bindi Fibrin gel binding Fen (Y205D) mutant

Castor bean calret Castor bean calret

N-CAM heparin bind Cell adhesion reco S. pombe Chkl kina Schizosaccharomyce

Partial sequence o Cell adhesion reco

Human NCAM 140kD i Peptide Seq ID No:

Lung cancer associ Human protein segu Human brain ring-f Momoordin (a riboso Momoordin, Momordi

Human colon cancer Plant type I RIP M Type I ribosome-in Type I ribosome-in Human colon cancer HincII restriction

Human Activin rece Human ALK-1. Homo TAR-3 polypeptide. Human activin rece

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MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
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AAP90402
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AAB21100
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AAY64629
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AAE00857
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AAB01586
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AAY28509
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99WO-US23240
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Pike SE,
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WO200020577-A1.
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Flea calreticulin
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16.025 Million cell updates/sec
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        GenCore version
Copyright (c) 1993 - 2000
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Maximum Match 100%
Listing first 45 summaries
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AAY92351
AAY92355
AAY92350
AAY11156
AAP92276
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                                             protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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                                           Contacting the cells with calreticulin (or its fragments).

Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with newascularization (e.g. diabetic neuropathy, retrolental fibroplasia, truchoma, neovascular glaucoma, psoriasis, anglofibromas, immune inflammation, atheroscierosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens systemic lupus exythroaditis, contact lens systemic lupus exythroaditis, solecodemic systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may with a strong for treating/inhibiting tumor growth especially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MBP-culreticulin; maltose binding protein; angiogenesis; inhibition; endochellal cell, anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
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                                    novel method of inhibiting endothelial cell growth comprises
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Pred. No. 1.7e-09;
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           Claim 4; Page 85; 99pp; English.
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Rest Local Similarity 100.
Matches 18; Conservative
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Synthetic.
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used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriaais, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, soleroderma, sjorgen's syndrome, asrcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
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Matches 18; Conserv
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Kaposi's sarcoma (claimed).
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A novel method of inhibiting endothelial cell growth comprises

C contexting the calls with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The angiogenesis, tumor growth and/or endothelial cell growth (claimed). The canglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental clibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immunue inflammation, atheroscolercis, excessive wound repair, retinal covascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, systemic lupus erythromatosus, thyroiditis, contact lens syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoldosis and primary bliliary cirrhosis). The method may collobe used for treating/inhibiting tumor growth especially
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contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Raposi's sarcoma (claimed).
                                                                                                                                                                                                                                  Gaps
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6.4e-09;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Recombinant delta-120 calreticulin.
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100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                       Query Match 100.
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  suppressing
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-303767/26
                                                                                                                                 180 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY92355;
                                                                                                                                     Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY92349) without the 17 N-terminal amino acids. A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabbetic neuropathy, retrolent fibroplasia, trachoma, neovasculariguacoma, psoriasis, anglofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MBP-calreticulin; maltose binding protein; angiogenesis; inhibition;
                                                                                                                                                             ;
                                                                                          Length 280;
                                                                                                                                                             Indels
                                      100.0%; Score 96; DB 21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY92350 standard; Protein; 400 AA.
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                                                                                                                                                                                                                               1 VIENYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                  10-AUG-2000 (first entry)
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                                                                                                                                                             18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-303767/26
                                                                                                                                 Similarity
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                                                                                              Query Match
Best Local
Sequence
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N-PSDB; AAP92276
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                                                                                                                                                                                                                                                                                                                                                              Calreticulin.
                                                   22-MAR-1989;
                                                                 22-MAR-1988;
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                       WO8909273-A
                                     05-OCT-1989
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         Synthetic.
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                                                                                                                                                                                                                                                                                                                       The present sequence is calreticulin. It and a C-domain derived peptide (AAM06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type opds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage to inhibit or prevent restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
               Gaps
                                                                                                                                                                                                                                                                             Inhibition of restenosis in patients - using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same activity.
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 Length 400
              Indels
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Score 96; DB 21;
Pred. No. 1.7e-08;
Mismatches 0;
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Pred. No. 1.7e-08;
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راجعه
                                                                                                                                      calreticulin; C-domain; restenosis; inhibitor
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                                                                              AAW11156 standard; peptide; 401 AA.
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100.0%;
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llarity 100.0%;
Conservative 0;
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95US-0442844
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                                                                                                          (first entry)
      Local Similarity 100.
ses 18; Conservative
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                                                                                                                                                                                                                                                 Michaluk M;
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Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                   401 AA;
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                                                                                                                        Calreticulin.
                                                                                                                                                     HOMO Saplens
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17-MAY-1995;
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                                                                                                                                                                                                                                                  Lucan A,
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Query Match
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       Rest Loc
Mutches
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Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                        DNA sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen - used in immunoassays to detect rheumatic disease
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100.0%; Pred. No. 1.8e-08;
iive 0; Mismatches 0;
                                                                                                                                                                  McCauliffe DP:
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89WO-US01213
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                                                    88US-0171634
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                                                                                                                                                                  Sontheimer RD, Capra JD,
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Best Local Similarity
Matches 18; Conserv
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WO9628469-A1
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                                                                                                                                                                                           Sequence
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                                                   This sequence is calreticulin, a homologue of Clq and collectin receptor (CCJqR). The invention relates to the use of a cClqR binding domain in a medicament to effect complement ublquiin (CUB) functionality, and an inhibitor of the cClqR binding domain in a medicament to inhibit cub functionality. The cClqR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor, is used to complement activation involved in the initiation and maintenance of inflammation, for example in myocardial infarction, brain ischaemia stroke), gut ischaemia, rheumatoid arthritis, systemic lupus exthematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                      MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endochellal cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                          Gaps
Use of a cClqR binding domain - to modulate complement ubiquitin (CUB) functionality.
                                                                                                                                                                                                                                                         ;
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                                                                                                                                                                                                                                     Length 417;
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                                                                                                                                                                                                                                   Score 96; DB 20;
Pred. No. 1.8e-08;
Mismatches 0;
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/label= signal_peptide
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/label= mature_protein
                                  Disclosure: Page 26-27; 31pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    useful for suppressing tumor growth
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100.0%;
                                                                                                                                                                                low molecular weight molecule
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                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    Human MBP-calreticulin.
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Best Local Similarity
Matches 18; Conserv
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A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with
                                                                                                                                                                                                                 neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immmune inflammation, atherosolerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hacmatophagous insect calreticulin protein - used to reduce insect infestation and desensitise patients to allergic dermatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Calreticulin; flea; haematophagous insect; allergic dermatitis; vaccine; therapy; PCtCal403.
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100.0%; Pred. No. 1.8e-08;
Live 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ctenocephalides felis.
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Matches 18; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 417 AA;
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                                                                                                                                                                                                                                                                                                                              MAP-calreticulin; maltose binding protein; anglogenesis; inhibition; cyndorheilal cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-artherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                 Gaps
animal to reduce infestation. It reduces calreticulin activity in insects, so reducing the insect burden on an animal. Calreticulin can be used to elicit an immune response, thereby desensitising an animal to allergic dermatitis caused by fleas, mosquitoes or
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A novel method of inhibiting endothelial cell growth comprises
                                                                                                          Length 403;
                                                                                           Score 91; DB 17; Length 40.
Pred. No. 1.20-07;
                                                                                                                                                                                                                                                                                                          Recombinant human calreticulin residues 132-180,
                                                                                                                              1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (USSH ) US DEPT HEALTH & HUMAN SERVICES
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                                                                                                                                                                                                                                     AAY92353 standard; Protein; 49
                                                                                                      94.8%;
94.4%;
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                                                                                                                                                     1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                   Local Similarity 94.4
nes 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-303767/26
                                                                      403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 AA;
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                                                                                                                                                                                                                                                                                                                                                                                        Homo napiens
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                                                                                                                                                                                                                                                                                   10-AUG-2000
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                                               Culicoides.
                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
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                                                                                                                   Hest Local
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The sequence was deduced from a cDNA clone lambda RAL-1 prepd. from RAM isolated from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically bind to protein prepd. from induced cultures of lambda RAL-1 lysogens recognise a single polypeptide of mol. wt. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. wt. 39.130. If the antigen is not subject to post-translational processing this suggests that most of the coding sequence is present. The three repeats are highly hydrophilic regions likely to be exposed on the surface of the antigen and highly immunogenic. Recombinant antiginal antigen expressed by the clone can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA encoding Onchocerca volvulos antigen - used to express recombinant antigen for vaccine against onchocerciasis or river
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              River blindness; onchocerciasis; vaccine; antigen; parasite.
     Length 49;
                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Partial sequence of Onchocera volvulus 42 kD antigen.
85.4%; Score 82; DB 21; 100.0%; Pred. No. 3.7e-07; ive 0; Mismatches 0;
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/label= repeat unit
/note= "hydrophilic"
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/note= "hydrophilic"
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/note= "hydrophilic"
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                                                                                                                                                                                                                                                                                                                 AAR12312 standard; Protein; 336 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                          Conservative
                                                                                                            4 NYKGKNVLINKDIRC 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Onchocerca volvulus
                       Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAQ11987
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Query Match
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Wed Jan 9-15:08:20 2002

336 AA;

Sequence

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ö This sequence represents the human neural cell adhesion molecule (NCAM) amino acid sequence. NCAM is found in three forms, two of which are transmembrane forms, while the third is attached via a lipid anchor to the cell membrane. All three NCAM forms have an extracellular structure consisting five immunoglobulin domains (Ig domains). The Ig domains are numbered 1 to 5 from the N-terminal. The invention relates to a compound containing a peptide which binds to the NCAM Igl domain. The compound binds to NCAM Igl/Ig2 domains, and is capable of stimulating or promoting neurite outgrowth from NCAM presenting cells, and is also capable of promoting the proliferation of NCAM presenting cells. The compound may be used in the treatment of normal, degenerated or damaged NCAM presenting cells. The compound may in particular be used to treat diseases of the NCAM; neural cell adhesion molecule; Igl; immunoglobulin domain 1; neurite outgrowth promoter; proliferation; nerve damage; sclerosis; impaired myellnation; stroke; Parkinson's disease; memory; schizophrenia; Alzheimer's disease; diabetes mellitus; circadian clock; nephrosis; Compositions that bind neural cell adhesion molecules useful for treating disorders of the nervous system and muscles e.g. Alzheimer's and Parkinson's diseases -Gaps Jensen PH; ; treatment; prosthetic nerve guide; treatment; nervous system Length 336; 3; Indels Human NCAM 140kD isoform precursor amino acid sequence. Ostergaard S, Score 66; DB 12; Pred. No. 0.0023; 3; Mismatches 3 Holm A, Olsen M, Osterg V, Ralets I, Berezin V; Disclosure; Fig 17; 119pp; English. AAY88565 standard; protein; 848 AA. |||:|| :| :| ||||| 92 vifhykdrnhmikkdirc 109 99WO-DK00500 98DK-0001232 99DK-0000592 1 VIFNYKGKNVLINKDIRC 18 07-AUG-2000 (first entry) Query Match , 68.8 Best Local Similarity 66.7 Matches 12; Conservative OLSEN M. OSTERGAARD S. RONN L C B. BOCK E. HOLM A. POULSEN F M. Soroka WPI; 2000-293111/25. JENSEN P H ы ы SOROKA V. RALETS I. BEREZIN V. Bock WO200018801-A2 Homo sapiens 23-SEP-1999; 29-SEP-1998; 29-APR-1999; 06-APR-2000 Poulsen FM, AAY88565; Ronn LCB, (HOLM/) (OLSE/) (OSTE/) (POUL/) (SORO/) (RALE/) (BERE/) (RONN/) JENS/) BOCK/) 13 AAY88565 ò g

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            damage, traumatic nerve damage, japaired myelination of nerve fibres, conditions resulting from a stroke, Parkinson's disease, Alzheimer's disease, dementias, sclerosis, nerve degeneration associated with disease dementias, sclerosis, nerve degeneration associated with neuro-muscular transmission and schizophrenia. Conditions affecting the neuro-muscles may also be treated with the compound, such as conditions associated with impaired function of neuromuscular connections (e.g. genetic or traumatic shock or traumatic atrophic muscle disorders). Conditions of the gonads, pancreas (e.g. diabetes mellitus types I and II), kidney (e.g. nephrosis), heart, liver and bowel may also be treated using the compound. The compound is used in a prosthetic nerve guide, and also to stimulate the ability to learn, and to stimulate the memory of a
                                                                                                                                                                                                                                                                                                                                                                                          Gaps
  central and peripheral nervous systems such as post operative nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cell adhesion modulation; CAM; synaptic stability; cadherin; cadherin-mediated adhesion; drug delivery; cell adhesion; tumour; wound healing; neurite outgrowth.
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                                                                                                                                                                                                                                                                                                                                               Score 51; DB 21; Length 848;
Pred. No. 2.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cyclic peptide cell adhesion modulating agents, useful for
                                                                                                                                                                                                                                                                                                                                                                                        2; Indels
                                                                                                                                                                                                                                                                                                                                                                                        8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide Seg ID No: 63 of WO9933875.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY21879 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            modulating synaptic stability
                                                                                                                                                                                                                                                                                                                                                 53.1%;
41.2%;
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149 iiwkhkgrdvilkkdvr 165
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Best Local Similarity 41.4.
7; Conservative
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                                                                                                                                                                                                                                                                                         848 AA;
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                                                                                                                                                                                                                                                    subject.
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The invention relates to methods using cadherin modulating agents, particularly paptides containing the sequence HAV or antibodies, for enhancing or inhibiting cadherin-mediated cell adhesion. The methods can be used to treat diseases or other conditions characterized by undestruble cell adhesion or to facilitate drug delivery to a specific tissure or tumnor (such as bladder tumnours, ovarian tumnours or melanomas). They can also be used to enhance cell adhesion (e.g. supplement or rehancing and/or directing neurite outgrowth. The methods can also be used for treating demyelinating neurite outgrowth. The methods can also be used for treating demyelinating neurite outgrowth. The methods can also be used for treating demyelinating neurite outgrowth. The methods can also be used for engancing drug delivery, treating cancers (such as carcinomas, leukenia or melanomas), inhibiting andogenesis, e.g. inducting adhesion of foreign tissue implanted in a mammal, andiogenesis, incenting the immune system, for chumuries or inhibiting symptic stability, treating spinal cord
                                                                                                                                                                           ö
tissue or tumour. Alternatively the agents may be used to enhance cell adhesion (e.g. to supplement or replace stitches or to facilitate wound healing) or to enhance or direct neurite outgrowth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cadherin; modulating agent; cadherin-mediated cell adhesion; cancer; drug delivery; bladder timour; ovarian tumour; melanoma; cell adhesion; wound healing; neurite outgrowth; demyelinating neurological disease; multiple sclerosis; carcinoma; leukemia; melanoma; ungjogenesis; CAR; apoptosis; diabetes; rheumatoid arthritis; immune system; pregnancy; vusopermeability; spinal cord injury; synaptic stability.
                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modulating cadherin-mediated cell adhesion useful for treating neurological disease and cancer
                                                                                                                                 Score 48; DB 20; Length 17;
Pred. No. 0.087;
7; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cell adhesion recognition (CAR) sequence.
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                                                                                                                                                                                                                                                                                                                                                AAY09101 standard; peptide; 17 AA.
                                                                                                                                   Query Match
Best Local Similarity 43.8%;
Matches 7; Conservative
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| 1 1wkhkgrdvilkkdvr 16
                                                                                                                                                                                                               2 IFNYKGKNVLINKDIR 17
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                                                                           17 AA;
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                                                                             Sodnence
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        Query Match
        50.0%;
        Score 48;
        DB 20;
        Length 17;

        Best Local Similarity 43.8%;
        Pred. No. 0.087;
        Natches 7;
        Aismatches 2;
        Indels 0;
        Gaps 0;

        Qy 2 IENYKGKNVLINKDIR 17
        |::||::|::||:|
        Db 1 iwkhkgrdvlikkdvr 16
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Search completed: January 9, 2002, 15:01:13 Job time: 159 sec us-09-828-000-3.rsp

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Compugen Ltd.
GenCore version
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Search time 25.18 Seconds (without alignments) 262.100 Million cell updates/sec

Title: Perfect score: Sequence:

US-09-828-000-3 971 1 EPAVYFKEQFLDGDGWTSRW.......PDNTYEVKIDNSQVESGSLE 180

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 seqs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 2000000000 88 Minimum I Maximum I

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	P27797 homo sapien P18418 rattus norv P152193 box taurus P52193 box taurus P52193 box taurus P29413 drosophila P1012 conforcea P27798 caenorhabdi Q23858 dictyosteli Q23858 dictyosteli Q23858 dictyosteli Q23858 dictyosteli Q23798 prime Q9xf98 prunus arme Q9xf98 prunus arbidopsis Q9c401 nicotiana p Q3xp3 chlamydomon 004151 arabidopsis Q9xp1 berberis st Q06814 schistosoma Q9xp2 zea mays (m 004153 arabidopsis P2644 mus musculu P3556 rattus norv P24643 canis famil P27824 homo sapien P57824 homo sapien P36581 schizosacch P36581 schizosacch P36581 schizosacch P36581 schizosacch	3
SUMMARIES	CRTC_HUMAN CRTC_RAT CRTT_RABIT CRTT_BABIT CRTT_BOVIN CRTC_MOUSE CRTC_MOUSE RALI_ONCYO CRTC_CAEEL CRTC_CAEEL CRTC_CAEEL CRTC_RUAR CRTC_RORYSA CRTC_RORYSA CRTC_RORYSA CRTC_RORYSA CRTC_RORYSA CRTC_BETWAR CRTC_RORYSA CRTC_BETWAR CRTC_RESEXT CRTC_SCHWA CRTC_SCHWA CRTC_SCHWA CRTC_SCHWA CRTC_SCHWA CRTC_SCHWA CRTC_SCHWA CRTC_ALWAN CRTC_ROWSE CALX_MOUSE CALX_HUWAN CALC_MOUSE CALX_HUWAN CALC_MOUSE CALX_HUWAN CALC_SCHPO CALX_SCHPO	:::::::
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MEDLINE-90237213; PubMed-2332496;
McCauliffe D.P., Lux F.A., Lieu T.S., Sanz I., Hanke J., Newkirk M.M.,
Bachinski L.L., Itoh Y., Sicillano M.J., Reichlin M., Sontheimer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 18-36.
MEDLINE=92002034; PubMed=1911778;
Rojiani M.V., Finlay B.B., Gray V., Dedhar S.,
In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (calreticulin) with a highly conserved amino acid sequence in the cytoplasmic domain of integrin alpha subunits.";
Biochemistry 30:9859-9866(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIINE-92129342; Pubmed-1733953; McCauliffe D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; The 5'-flanking region of the human calreticulin gene shares homology with the human GRP78, GRP94, and protein disulfide isomerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-90380058; PubMed-2400400;
Krause K. H., Simmerman H.K. B., Jones L.R., Campbell K.P.,;
Sequence similarity of calreticulin with a Ca2(+)-binding protein
that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store in HL-60
                                                                  74.70-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALREDICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (52 KDA
RIBONUCLEOPROTEIN AUTOANTIGEN RO/SS-A).
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                                                                                                                                                                    Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lamerdin J., McCready P., Stilwagen S., Ramirez M., Carrano A.;
Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
                                     AA.
                                     417
                                     PRT;
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                                     STANDARD;
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protein database of normal human epidermal keratinocytes.";
Electrophoresis 13:960-969(1992).
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Appel K.D., Hughes G.J.;

Inver protein map: a reference database established by microssequencing and gel comparison.";

Electrophoresis 13:992-1001(1992).
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Vandekerckhove J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; Extraret.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
ProDom; PB001866; Calreticulin; 1.
PROSITE; PS00014; Extraretrilin; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
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PROSITE; PS00805; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
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P-DOMAIN.
C-DOMAIN.
                                                        MEDLINE-93162045; Pubmed :1286669;
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EMBL; AD000092; AAB51176.1; --
FIR; A37047; A37047.
FIR; A1475; S11475;
FIR; A46330; AA2330.
FIR; A46452; A46452.
AMTSA-52PAGE; P27797; HUMAN.
AATHUS/GHORT-2DPAGE; 9401; IEF.
HSC-21PAGE; P27797; HUMAN.
                                                                                                                                                                        MEDLINE-93162043; PubMed-1286667;
          lochem. J. 270:545-548(1990).
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                                                                                                                                                            TISSUE-Keratinocytes;
                                 SEQUENCE OF 18-28.
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                                             TISSUE-Liver
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Sclurognathi; Muridae; Murinae; Rattus
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Exp. Cell Res. 205:101-110(1993).
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Okinaga S., Kobayashi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P18418; P10452;
01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last aequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (CALBP)
(CALCIUM-BINDING PROTEIN 3) (CABP3).
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"Structural homology between the rat calreticulin gene product and
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STRAIN-SPRAGUE-DAWLEY, TISSUE-Brain cortex;
MEDLINE-90370496; PubMed-2395661;
Murthy K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
Holmes C., Patel Y.C.;
                                                                                                                                                                                                                                                             Length 417;
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PREVENT SECRETION FROM ER.
                                                                                                                                                                      SSING (IN REF. 3).
BC37C3C0F1054FB2 CRC64;
1-4.
3 X APPROXIMATE REPEATS.
2-1.
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                                                                                                                                                                                                                                                        Score 971; DB 1;
Pred. No. 4.8e-80;
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                                                                                                                                                                                                                                                                                                   Mismatches
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Nucleic Acids Res. 18:4933-4933(1990).
                                                                                                                                                                      MISSING
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MEDLINE 93202172; PubMed 8453984;
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48141 MW;
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Mammalia; Eutheria; Rodentia;
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297
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417 AA;
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Best Local Similarity
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                                                                                                                                                                                                                                                                                  "Identification of protein disulfide isomerase and calreticulin as autofimmune antiques in LEC strain of rates";
Blochim. Blophys. Acta 1158:339-344(1993).
-i- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM BINDIS GALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM BINDING STITES.
-i- SUBGELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-i- SUBLEATIY: BELONGS TO THE CALREFICULIN FAMILY.
-i- CAUTION: MAS ORIGINALLY (REE. 2) THOUGHT TO BE D-BETA-HYDROXYBUTYRATE DEHYDROGENASE.
                                           MEDLINE-91054414; PubMed-2241926;
Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
"Calreticulin is a candidate for a calsequestrin-like function in
                                                                                           Ca2(+)-storage compartments (calciosomes) of liver and brain."; Blochem. J. 271:473-480(1990).
                                                                                                                                                    MEDLINE-92360010; PubMed-1497655;
Nakamura M., Michikawa Y., Baba T., Okinaga S., Arai K.;
"Calreticulin is present in the acrosome of spermatids of rat
                                                                                                                                                                                                                                                              ., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi
Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
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4 X APPROXIMATE REPEATS.
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PRODOM; PD001866; CALRETICULIN; 1.
PROSITE; PS000014; ER_TRRET; 1.
PROSITE; PS00804; CALRETICULIN 1; 1.
PROSITE; PS00805; CALRETICULIN 2; 1.
PROSITE; PS00805; CALRETICULIN REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; 5.
SIGNAL
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P-DOMAIN.
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EMBL; X13702; CAA31987.1; ALT_SEQ.
EMBL; X79327; CAA55890.1; -.
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InterPro; IPR000886; ER_target.
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1-3.
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Pfam; PF00262; calreticulin; 1.
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PIR; SO4867; S04867
PIR; S13055; S131205
PIR; S13045; S13045.
PIR; S493176
PIR; S45036; S45036
PIR; JH0819; JH0819.
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Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L., Vance J.E., Opas M., Michalak M.; "Calreticulin, and not calsequestrin, is the major calcium binding protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic reticulum.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUB-Slow-twitch skeletal muscle,
MEDLINE=90094320; PubMed=2600080;
Fliegel L., Burns K., Maclennan D.H., Reithmeier R.A.F., Michalak M.;
"Molecular cloning of the high affinity calcium-binding protein
(calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Biol. Chem. 264:21522-21528(1989).
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                                                                                                                                                                                                                                                                                                                                                          Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M., Maclennan D.H., Meldolesi J., Pozzan T.;
(Calreticulin is a candidate for a calsequestrin-like function in Ca2(+)-storage compartments (calciosomes) of liver and brain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fliegel L., Michalak M.; ^{\circ} "Past-twitch and slow-twitch skeletal muscles express the same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                                                                                                                                                  Score 933; DB 1; Length 416;
Pred. No. 1.2e-76;
5; Mismatches 5; Indels
                                                                                                                                       PREVENT SECRETION FROM ER 2E6713CED31A2970 CRC64;
3 X APPROXIMATE REPEATS. 2-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biochem. Biophys. Res. Commun. 177:979-984(1991)
                                                                                        ASP/GLU/LYS-RICH.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       418 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
TISSUE=Fast-twitch skeletal musclo
MEDLINE=91282795; PubMed=2059224;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=91054414; PubMed=2241926;
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                                                                                                                                                                  MM.
                                                                                                                                                                                                                                    96.1%;
94.4%;
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                                                                                                                                                                                                                                    Query Match 96.1
Best Local Similarity 94.4
Matches 170; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
  297
269
283
297
407
163
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416 AA;
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  259
259
273
287
351
137
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01-OCT-1996
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GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                            CRT1_BOVIN
P52193;
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DISULFID
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CRT1_BOVIN
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Matches
          121
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                            g
                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its most by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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                          MEDLINE-92002038; PubMed 1911780;
Guan S., Fullck A.M., Williams D.E., Cashman J.R.;
"Ryidence for complex formation between rabbit lung flavin-containing
monocxygenase and culreticulin.";
Hiochemistry 30:9892-9900(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                          -i-FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-i-SUBBNIT: MONOMER (BY SIMILARITY).
-i-SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 418;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 931; DB 1; Length 41
Pred. No. 1.9e-76;
1; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                    Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B6082B689DC763A6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                             X APPROXIMATE REPEATS
                                                                                                                  -1 - SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (IN REF. 5)
                                                                                                                                                                                                                                                                                            InterPro; IPR001880; Calraticulin.
InterPro; IPR001886; ER_target.
Pfum; PR00262; calreticulin; 1.
PRNINTS; PR00626; CALRETICULIN; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                         CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                  N-DOMAIN.
P-DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                     C-DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 95.6
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                 Endoplasmic reticulum;
                                                                                                                                                                                                                                                                                                                                                                                                         418
1197
308
418
202
202
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163
418
                                                                                                                                                                                                                                              D33208; D33208.
E33208; E33208.
F33208; F33208.
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PIR; S13047; S13047.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   418 AA;
          PARTIAL SEQUENCE.
                     Lund
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138 GPGTKKVHVIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED (GLCNAC. ..).
PREVENT SECRETION FROM ER (POTENTIAL).
7D4B68DFC689EEFI CRC64;
                                                                                                                                        Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoldea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                       01-OCT-1996 (Rel. 34, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 1 (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 400;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 X APPROXIMATE REPEATS
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Pred. No. 2.2e-76;
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                                                                                           01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last seq
01-0CT-1996 (Rel. 34, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MM;
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95.0%;
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400
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                                                                       STANDARD;
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120
162
397
400
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1174
1174
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1193
110
227
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227
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227
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CRTC_DROME
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
121 GPGTKKVHVIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPNNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDINE-93013037; PubMed-1398135; Mazzarella R.A., Gold P., Cunningham M., Green M.; "Determination of the sequence of an expressible cDNA clone encoding ERp60/cairegulin by the use of a novel nested set method."; Gene 120:217-225(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN-BALB/C; TISSUE-Liver;
MEDLINE-90059955; PubMed-2583110;
Smith M.J., Koch G.L.E.,
"Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a major calcium binding ER/SR protein.";
EMBO J. 8:3581-3586(1989).
                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Electrophoresis is:735-745(1994).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBBAIT: MONOMER (EN SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-9500907; PubMed-7523108; Merrick B.A., Patterson R.M., Wichter L.L., He C., Selkirk J.K.; "Separation and sequencing of familiar and novel murine proteins
                                                                                                                                                                                                                           01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
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REMBL; M92988; AAA37569.1; -
REMBCS-2DPAGE; P14211; MOUSE.
REMSCORP: REMSCORPE; Calreticulin.
InterPro; IPRO00886; ERLtarget.
REMSCORPE; PRO0086; CALRETICULIN.
REMSCORPE; PSO00014; ERLTARGET; 1.
REMSCORPE; PSO00004; CALRETICULIN. 1.
REMSCORPE; PSO00005; CALRETICULIN. 2: 1.
REMSCORPE; PSO00005; CALRETICULIN. 2: 1.
REMSCORPE; PSO00005; CALRETICULIN. 2: 1.
REMSCORPE; REMSCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           using preparative two-dimensional gel electrophoresis.";
                                                                                                                                                                                416 AA
                                                                                                                                                                                PRT;
                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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                                                                                                                                                                       CRTC_MOUSE
P14211;
                                                                                                                   CRTC_MOUSE
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A Adams M.D., Celliker S.E., Holf R.A, Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
A Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
A George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfelifer B.D.,
An H.J., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
An H.J. J.F., Agbayani A., An H.-J., Andrews Prannkoch C., Baldwin D.,
Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
A Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
A Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
A de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
A Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa, Arthropoda; Tracheata; Hexapoda; Insecta;
Pheryota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidee; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DPAIYFKEQFLDGDAWINRWVESKHKSDFGKFVLSSGKFYGDLEKDKGLQTSQDARFYAL 77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 930, DB 1; Length 416;
Pred. No. 2.3e-76;
5; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                       PREVENT SECRETION FROM ER. 24C03B00913408DB CRC64;
                           C-DOMAIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                               3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-APR-1993 (Rel. 25, Created)
01-OCT-1993 (Rel. 27, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                   ASP/GLU/LYS-RICH.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               406 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-BERKELEY;
MEDLINE-20196006; Pubmed-10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=93208374; PubMed=1296819; Smith M.J.;
                                                                                                                                                                                                                                                                                                                                                                  MM;
                                                                                                                                                                                                                                                                                                                                                                                                                                           95.8%;
                                                                                                                                                                                                                                                                                                                                                                  47994
                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 95.8
Best Local Similarity 94.4
Matches 170; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA Seq. 3:247-250(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               homologue
                                                                                                                                                                                                                                                                                                                                                               416 AA;
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=7227;
198
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229
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273
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137
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               calreticulin
                                                                                                                                                                                                                                                                                   DOMAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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21 VYLKENF-DNENWEDTWIYSKHPGKEFGKFVLTPGTFYNDAEADKGIQTSQDARFYAASR 79

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Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W., Rolodk A., Gong F., Garg N.S., Gelbart W.M., Glasser K., Gong F., Gortell J.H., Gu Z., Guan P., Harris M., Harris N.L., Harvey D., Helman T.J., Hernandez J.R., Houck J., Adail M., Kalush F., Karpen G.H., Wel M. H., Ibegwam C., Jalail M., Kalush F., Karpen G.H., We Z., Kennison J.A., Ketchum K.A., Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Liang Y., Lin X., Mattel B., McIntosh T.C., Morris J., Moshrefi A., Mortien B., McIntosh T.C., Morris J., Moshrefi A., Mount S.M., Moy M., Murphy E., Murphy L., Muzny D.M., Nelson D.L., Nelson R.A., Nixon K., Nusskern D.R., Pacleb J.M., Anison R.A., Nixon K., Nusskern D.R., Pacleb J.M., Remington K.S., Paulaxolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G., Renington K.S., Sunders R.D.C., Scheeler F., Shen H., Spier B., Spredling A.C., Stapleton M., Strong R., Sun E., Spredling A.C., Stapleton M., Strong R., Sun E., Spredling A.C., Stapleton M., Etrong R., Yao Q.A., Wallsams S.M., Woodege T., Worley K.C., Wu D., Yang S., Yao Q.A., Williams S.M., Woodege T., Worley K.C., Wu D., Yang S., Yao Q.A., Milliams S.M., Woodege T., Worley K.C., Wu D., Yang S., Zhu X., Smith H.O., Zheng X., Myers E.W., Zavori J.S., Zhan M., Zhang G., Zhan X., Zhu S., Zhu X., Zheng X., The genome Requence of Drosophila melanogaster.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its most by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercal RAL-1 antigen and an aplysia 'memory molecule'.'

"B. Cilin. Invest. 86:332-335(1990).

-I- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APPINITY CALCIUM-BINDING SITES.

-I- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

-I- SUBCELLULAR LOCATION: THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 91-124 AND 182-220.
MEDLINE-90307981; Pubmed 2365822;
McCauliffe D.P., Zappi E., Lieu T.S., Michalak M., Sonthelmer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Endoplusmic reticulum; Calcium-binding; Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -> A (IN REF. 3).
-> L (IN REF. 3).
65D72C69D0BEC427 CRC64;
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InterPro; IPR001580; Calreticulin.
InterPro; IPR001580; Calreticulin; I.
PRIMIN: PR00626; CALRETICULIN.
PROSITE; PS00014; ER.TARGET; I.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.
PROSITE; PS00805; CALRETICULIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL, AE003683, AAF54416.1,
PIR, A37158, A37158
Flybase, FBgn0005585, Crc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   406
107
184
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406 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Capra J.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONFLICT
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                   SOLILI EN CONTROLO CO
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EMBL; M20565; AAA59056.1; -.
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257
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                                                                                                                                      REPEAT
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                                                                                                                                                                                                               Gaps
                                                                                                                                                                                        72.0%; Score 699; DB 1; Length 406; 74.2%; Pred. No. 1.3e-55; 1ve 14; Mismatches 30; Indels
                                                                                                                                                                                                             14; Mismatches
                                                                                                                                                                                                              Matches 132; Conservative
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45298 MW;

388 AA;

4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62

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Best Local Similarity

Query Match

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                    SFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                            MEDLINE-08273584; PubMed=2455736;
Unnasch T.R., Gallin M.Y., Soboslay P.T., Erttmann K.D., Greene B.N.
"Isolation and characterization of expression cDNA clones encoding
antigens of Onchocerca volvulus infective larvae.";
J. Clin. Invest. 82.262-269(1988).
                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchocercidae; Onchocerca.
                                                                                                                                                                                                                                                                                                                                                                                 Rokeach L.A., Zimmerman P.A., Unnasch T.R., "Epitopes of the Onchocerca volvulus RAL1 antigen, a member of the calreticulin family of proteins, recognized by sera from patients
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'SIMILARITY.
9537F298A2D31CD6 CRC64;
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4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 X APPROXIMATE REPEATS. 2-1.
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                                                                                                                                                                                                  01-JUL-1989 (Rel. 11, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOY-1996 (Rel. 34, Last annotation update)
RAL-I PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                       388 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR: A32507; A32507.
InterPro; IPR01580; Calreticulin.
Pram; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.
PROSITE; PS00805; CALRETICULIN.
PROSITE; PS00805; CALRETICULIN.
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SIGNAL 1 17 POTENTIAL.
                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Infect. Immun. 62:3696-3704(1994).
                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-94341871; PubMed-7520419;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 53-388 FROM N.A.
                                                                                                                                                                       STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  with onchocerciasis
                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                       NCBI_TaxID-6282
                                                                                                                                                                       RAL1_ONCVO
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RAL1_ONCVO
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STRAIN-AX3;
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Matches 113;
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Q23858;
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DISULFID
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                                             5
                                                                                                             FE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                          Gaps
                                                                 4 VYFKEQFLDGDGDGWISRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                              Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                      123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA SECT. 2:235.240(1892).

-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.

-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                  "A C. elegans gene encodes a protein homologous to mammalian
                     Length 388;
                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 X APPROXIMATE REPEATS.
1-1.
1-2.
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InterPro; IPR001580; ER_target.
Pfam; PF00262; Calreticulin; 1.
PRODOM; DB001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN_2: 1.
PROSITE; PS00805; CALRETICULIN_2: 1.
PROSITE; PS00805; CALRETICULIN_2: 1.
PROSITE; PS00805; CALRETICULIN_2: 1.
PROSITE; PS00806; CALRETICULIN_2: 1.
PROSITE; PS00806; CALRETICULIN_2: 1.
PROSITE; PS00806; CALRETICULIN_2: 1.
PROSITE; PS00806; CALRETICULIN_2: 1.
                     Query Match

GR.4%; Score 664; DB 1; L.

Best Local Similarity 67.4%; Pred. No. 1.7e-52;

Matches 120; Conservative 26; Mismatches 30;

Matches 120; Conservative 26; Mismatches 30;
                                                                                                                                                                                                                                                              01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
                                                                                                                                                                                                                                           395 AA.
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P-DOMAIN.
C-DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
MEDLINE-92329978; Pubmed-1627827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X59589; CAA42159.1; -. PIR; S25851; S25851.
                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                          Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         395
192
301
395
250
216
                                                                                                                                                                                                                                                                                                   CALRETICULIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                              calreticulin.
                                                                                                                                                                                                                                         CRTC_CAEEL
P27798;
                                                                                                                                                                                                                                                                                                                                                                                                                       Smith M.J.;
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REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                                                                          4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                        123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Muchanter Taubenberger A., Garisch G.;
Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLOLAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                              63.8%; Score 619.5; DB 1; Length 395; 63.5%; Pred. No. 1.7e-48; ive 26; Mismatches 36; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALRETICULIN.
4 X 12 AA APPROXIMATE REPEATS.
1-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
SIGNAL 1
                                                                                                                                                                                                        PREVENT SECRETION FROM ER 35CA7D2EC1D56B03 CRC64;
1-3.
1-4.
2 x APPROXIMATE REPEATS.
2-1.
2-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR.
Dictyostellum discoideum (Slime mold).
Eukaryota, Mycetozoa; Dictyostellida; Dictyostellum.
                                                                                                                                                    ASP/GLU/LYS-RICH.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DictyDb; DD00042; ...
InterPro: IPR001580; Calraticulin.
InterPro: IPR000866; Extarget.
Péan; PF00262; Calraticulin; I.
PRINTS; PR00626; CALRETICULIN.
PROSITE; PS000804; CALRETICULIN.2; I.
PROSITE; PS00804; CALRETICULIN_2; I.
PROSITE; PS00014; ER_TARGET; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequ
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                                                                                                                                                                                                        395
45616 1
                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
  233
250
292
264
278
                                                                                                                                                                                                                                       AA;
                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DD00042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
191
191
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Viereck R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRTC_BETVU
                         SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
CRTC_BETVU
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the European Bioinformatics Institute. There are no restrictions on its
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or send an email to license@lsb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Navazzio L., Baldan B., Martin W., Mariani P.;
"Evidence for conservation of a calcium homeostat component:
purification characterization and cloning of calreticulin from Euglena
gracilis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (DEC-1996) to the EMBL/GenBank/DDBJ databases.
--- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LUM AFFINITY CALCIUM BINDING SITES (BY SIMILARITY).
--- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULIM LUMEN (BY SIMILARITY).
--- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GPGTKKVHVIFNYKGKNVLINKDI-RCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                          4 VYFKEQFLDGDGWTSRWIESK-HKSD--FCKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                   21 VHFKDTF-DND-WESRWVVSDWHKEDGKSGKLVHTAGKWFGDENQ-KGIQTSEDARFYAV 77
                                                                                                                                                                               PREVENT SECRETION FROM ER (POTENTIAL).
BAF273694FB6FC37 CRC64;
                                                                                                                                                                                                                                                                                                                   .
8
1-2.
1-3.
1-4.
3 x 11 AA APPROXIMATE REPEATS.
2-1.
2-2.
                                                                                                                                                                                                                                                                    Length 424;
                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS008014; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; FALSE_NEG.
ROGOLUSMIC reticulum; Calcium-binding; Repeat; Signal.
SIGNAL 19 A01 CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Euglenozoa; Euglenida; Euglenales; Euglena.
NCBL_TuxID 3039;
                                                                                                                                                                                                                                                                                                                33;
                                                                                                                                                                                                                                                                    55.3%; Score 537; DB 1; 57.2%; Pred. No. 4.7e-41; ive 36; Mismatches 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
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                                                                                                                                   2-3.
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
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                                                                                                                                                                                                                                                                  Query Match
Bost Local Similarity 57.2%;
Matches 103; Conservative
                                                                                                                                                                                                    48350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALRETICULIN PRECURSOR.
                                                                                                                                                                                                    424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euglena gracilis.
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DISULFID
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                       REPEAT
REPEAT
                                                                  DOMAIN
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Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: BENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 F-EPFSNKGOTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 IYYKETF--EPDWETRWTHSTAKSDYGKFKLTSGKFYGDKAKDAGIQTSQDAKFYAISSP 77
                                                                                                                                                                                                                                                                                                                                                                                                               4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               136 ATKKIHFILTYKGKNLLWKKEPRCETDTLSHTYTAVIKADRTYEVLVDQVKKESGTLE 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
5 55FEC3489F77CA7 CRC64;
     PREVENT SECRETION FROM ER (POTENTIAL). 056B074C16292674 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Beta vulgaris (Sugar beet).

Beta vulgaris (Sugar beet).

Strachcophyta; Embryophyta; Trachcophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophyllidae; Caryophyllida
                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                               Length 401;
                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                          42:
                                                                                                                                                                                                     Score 535.5; DB Pred. No. 6e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
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InterPro; IPR001880; Calreticulin.
InterPro; IPR001886; Extarget.
Pfam; PF00262; Calreticulin; IPR00088; Extarget.
PRODOM; PD001866; Calreticulin; IPROSITE; PS00014; Extarget: IPROSITE; PS00083; CALRETICULIN. IPROSITE; PS00803; CALRETICULIN. IPROSITE; PS00803; CALRETICULIN. 2; 1.
PROSITE; PS00803; CALRETICULIN. 2; 1.
PROSITE; PS00806; CALRETICULIN. 2; 1.
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                                                                                                                                                                                                                                                                                                          Mismatches
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CALRETICULIN.
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20-AUG-2001 (Rel. 40, Last seq
20-AUG-2001 (Rel. 40, Last and
CALRETICULIN PRECURSOR.
401 P
45910 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN~VV-D/ZR5; TISSUE~Leaf;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48136 MW;
                                                                                                                                                                                                     55.1%;
56.7%;
                                                                                                                                                                                                                                                                                                          Matches 101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
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398 4
401 AA;
                                                                                                                                                                                               Query Match
Best Local Similarity
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3;

6; Gaps

43; Indels

Mismatches

31;

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Conservative
      66;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
CRTC_PRUAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN
          Matches
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                                                                   3;
                                                                                                                                                                                                                                                                                             Pfan: PF00262; calreticuli; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS000014; ER_TAKGET; 1.
PROSITE; PS00804; CALRETICULIN 1; 1.
PROSITE; PS00804; CALRETICULIN 2; 1.
ENGSTE; PS00805; CALRETICULIN 2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                               SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids I; Malpighiales; Euphorbiaceae; Ricinus.
                                                                      Gaps
                                                                                                                               4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                    121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. MEDIAGE 9290642; MEDIAGE 5.7, Winfrey R. Jr.; Cloning and characterization of the calreticulin gene from Ricinus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALRETICULIN.
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plant Mol. Biol. 34:897-911(1997).
-!- FUNCTION: THES PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING STITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                         9
   Length 416;
54.7%; Score 531; DB 1; Length 41
55.9%; Pred. No. 1.6e-40;
tive 28; Mismatches 45; Indels
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20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ricinus communis (Castor bean).
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412 4
415 AA;
                                    Similarity
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                                                                   Matches 100;
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P93508;
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      Query Match
Best Local 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Probom; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum, Calcium-binding; Repeat; Signal; Glycoprotein.
SIGNAL
                                                                                                       SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                         121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                              PREVENT SECRETION FROM ER (POTENTIAL). 4F5F94CBAA6C6690 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=CV. BERGERON; TISSUE=Mesocarp, and Endocarp; Mbeguie-A-Mbeguie D., Fils-Lycaon B.R.; "Molecular cloning and nucleotide sequence of a calreticulin from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
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40, Last annotation update)
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Interpro; IPR000886; ER.target.
Pfam; PF00262; calreticulin; I.
PRINTS; PR00626; CALRETICULIN.
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20-AUG-2001 (Rel. 40, L
CALRETICULIN PRECURSOR.
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Best Local Similarity
Matches 99; Conserv
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Length 415;

Score 527; DB 1; Pred. No. 3.6e-40;

54.3%; 55.3%;

Query Match Best Local Similarity

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DISULFID
CARBOHYD
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                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its meet by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Komatsu S., Li Z.;
"Cloning the cona encoding a calcium-binding protein which involved in "Cloning the cona encoding a calcium-binding protein which involved in schoneration of rice cultured suspension cells.";
Submitted (DEC-1998) to the EMBL/Genbank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFPIRITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: EMDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                       SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                            PRIMITE PRODUCTS CALRETTOULIN; I PRIMITE; PRODUCTS CALRETTOULIN; I PRODUCTS CALRETTOULIN.
PRODUCT PRODUCTS CALRETTOULIN; I PROSITE; PSO0004; EALRETTOULIN, I; I PROSITE; PSO0004; CALRETTOULIN, I; I PROSITE; PSO0004; CALRETTOULIN, I; I EMPRITE; PSO00004; CALRETTOULIN, I; I EMPRITE; PSO00005; CALRETTOULIN, REPRAT; I. EMPRITE PSO000005; CALRETTOULIN, REPRAT; I. EMPRITE PSO00005; CALRETTOULIN, REPRAT; I. EM
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26 VFFEERF -- EDGWDKRWVTSEWKKDENLAGEWNYTSGKWNGD-PNDKGIQTSEDYRFYAI 82
                                                                                                                       121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDRFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
3172634F1580FC14 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                       Eukuryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryzea.
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55.9%; Pred. No. 3.7e-40;
:1ve 31; Mismatches 42; Indels
                                                                                                                                                                                                                                                                                                                20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
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InterPro; IPR000886; ER_target.
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Matches 100; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                   Oryza sativa (Rice).
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Q9SLY8;
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                                                                                                                                                                                                                                                                        01-NOV-1995 (Rel. 32, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                              148 GYSTKKVHTIFTKNDKNHLIKKDVPCETDQLSHVYTLIIHPDATYSILIDDNVEKQSGSI 206
121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoldea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biochim. Biophys. Acta 1202:70-76(1993).
-1- FUNCTION: THIS PROFEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASP/GLU/LYS-RICH.
BY SIMILARITY.
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
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InterPro; IPR001886; ER_target.
Pfam; PF00262; Calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
ProDom; PR001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS000803; CALRETICULIN_1; 1.
PROSITE; PS00806; CALRETICULIN_2; 1.
PROSITE; PS008065; CALRETICULIN_BEPAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CALRETICULIN, BRAIN ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- SUBUNIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C-DOMAIN.
4 X APPROXIMATE REPEATS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-93385184; PubMed-8373827;
                                                                                                                                                                                                                                            01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last seq
15-JUL-1998 (Rel. 36, Last ann
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Bovidae; Bovinae; Bos
                                                                                                                                                                                                                                                                                                                                                            Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID :9913;
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202
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              calreticulin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Brain;
                                                                                                                                                                                         CRT2_BOVIN
P42918;
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DB 1; Length 421;

53.8%; Score 522.5;

Query Match

4;

Best Local Similarity 55.6%; Pred. No. 9.4e-40; Matches 109; Conservative 12; Mismatches 30; Indels 45; Gaps	GDGWTSI	1 1 1 1 1 1 1 1 1 1	SODARFYALSASFEPFSNKGQTLVVQFTVKH	87 KSHGRRTLVGCSPWGHEEQNIDCGGGYNVFPAGLDQTD 125	105 MHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNT 164	6 MHGDSEYNIMFGPDICGPGTKKVHVIFNYFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPNNT 185	165 YEVKIDNSQVESGSLE 180		
Best LA Matche						126			
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Search completed: January 9, 2002, 15:12:14 Job time: 656 sec

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GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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- protein search, using sw model OM protein

January 14, 2002, 08:48:49 Run on:

; Search time 23.38 Seconds
(without alignments)
570.282 Million cell updates/sec

US-09-828-000-3 Title: Perfect score:

1 EPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSQVESGSLE 180 Sequence:

OLIGO Gapop 60.0 , Gapext 60.0 Scoring table:

522463 seqs, 74073290 residues Searched:

Word size :

14 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Listing first 45 summaries

Database :

A_Geneseq_1101:*

1: /SIDSB/gcgdata/geneseq/geneseqp/AA1980.DAT:*
2: /SIDSB/gcgdata/geneseq/geneseqp/AA1981.DAT:*
2: /SIDSB/gcgdata/geneseq/geneseqp/AA1981.DAT:*
4: /SIDSB/gcgdata/geneseq/geneseqp/AA1981.DAT:*
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10: /SIDSB/gcgdata/geneseq/geneseqp/AA1988.DAT:*
11: /SIDSB/gcgdata/geneseq/geneseqp/AA1989.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	no: to rosed		Human vasostatin (Recombinant human	60 kD Ro (Ro/SSA)	Human MBP-calretic	Calreticulin. Hom	Calreticulin. Hom	Recombinant human	Recombinant human	Recombinant delta-	Recombinant human	Human cClqR bindin
	1		AAY92351	AAY92350	AAP92276	AAY92349	AAY00927	AAW11156	AAY92352	AAY92354	AAY92355	AAY92353	AAY00924
	E C	:	21	21	10	21	20	18	21	21	21	21	20
	Query Match Length DB		180	400	417	417	417	401	61	09	280	49	122
оP	Query		100.0	100.0	100.0	100.0	0.06	42.8	33.9	33.3	33.3	27.2	20.0
	Score		180	180	180	180	162	77	61	9	9	49	36
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EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60

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Rat cClqR binding Mouse cClqR bindin Partial sequence o	ł\													calreticulin,			enesis,	method may be	with) }		0	may				Gaps 0;
JR b 11gR seq	•				nal; lc;									etic			its) iod	hod	i wi	ine	lon,	- 5	יסי ב				Ga
t cClc use cC rtial	`			<u>.</u>	MBP-calreticulin; maltose binding protein; vasostatin; N-terminal angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antiinflammatory; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.											comprises	<pre>i tragments/variants) inhibition of angiog</pre>	the lial cell growth (claimed). The method is openes is in a patient. The anglogenes is is	ciated with	i mum	is, excessive wound repair, retinal degeneration, corneal graft rejection	Contact lens overwear, cronn's disease, non-immune intlammation, trheumatoid arthritis, systemic lupus erythromatosus, thyroiditis confirmation, contains and contains and contains and contains and contains a c	e method	11y		180;	0;
Ra MO Pa		* *.		acids)	n; N- iogen cal; rotic									angiogenesis using		comp	ents/ tion). T	asso	omas,	excessive wound repair, retinal Jeneration, corneal graft reject	thyr	The	growth especially		Length	Indels
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26 25 12	NMEN			cmina	rote al ce stat ant phtha						ICES			and a		elia	culin (or its at least 40% 1	l gre	ום נו יים דוופ	rias	ssive	ase,	biliary			180	ed. No. 2e Mismatches
AAY00926 AAY00925 AAR12312	ALIGNMENTS	AA.		N-terminal	ng p heli cyto tory c; o						HUMAN SERVICES			growth growth	;	endothelial	ticu s at	cel	tha	bso	exce	lupu	primary bi	itin		Score	Pred. Mis
		180		lin	indi ndot ic; amma						MAN			ნ.	English	g en	calreti causes	lial	ther	oma,	ıs, deg	nis nic	rima	nhib			ć
20 20 12		in;	(}	icu	se b n; en abet Infla				3240	3438	6 HU	, L;		cell trumor	Eng	tin	o o e.e.	the	36.0	auc	llar	ste	and po	ng/1 ed).		100.08;	6 .0
122 122 336		Protein;	t entry)	(calreticulin	WBP-calreticulin; maltose binding protein; vangiogenesis; inhibition; endothelial cell; aneuroprotective; antidiabetic; cytostatic; dimmunosuppressive; antilnflammatory; anti-atigastrointestinal; anti-arthritic; ophthalmic				99WO-US23240	98US-0103438	DEPT НЕАLTH	, Yao	. 9	endothelial suppressing t	99pp;	inhibiting	contacting the cells with calreticulin (or Fragments of calreticulin causes at least	and/or endothelial cell	iated with a disease other than a scularization (e.g. diabetic neur	trachoma, neovascular glaucoma,	ınilammatıon, atherosclerosi neovascularization, macular	Nerwear, Uhritis, SJ	sis ar	treating/ir (claimed).		10(larity 100 Conservative
0.99		ırd;	(first		in; intilipie; as; as; as; as; as; as; as; as;				M66	980	r HE	SE,	57/2	othe	82;		cel	d/o	a c	sco	the	rerw hrit	oido		180 AA;		rity nser
100		standard;		vasostatin	culls; ctive	18.	7-A1	·				Pike	-303767/26	ende	Page !	method	contacting the Fragments of ca	ch an	associated with a d	1eov	on, g	artl		O	180		Similarity 0; Conser
36 19			10-AUG-2000	asos	reti enesi otec	sapiens etic.	WO200020577-A1	13-APR-2000	-1999	-1998	OS.	o,	2000-3	ing	4; Pa	. met	ing its c	growth or inh	tted	la,	natic :ulai	contact lens c rheumatoid art	Je, s	ກຮ	ø	ť.	
		T 351 AAY92351 AAY92351;	AUG	Human v	ropi ropi nunos		0000	APR	05-OCT-	06-OCT	(HSSN)	Tosato		Inhibiting useful for	Claim 4	novel	tact	tumor g	ocia	chor	. Lami	Lact sumat	syndrome,	also be Kaposi's	Sequence	Mate	Ö
12 13 14		RESULT AAY92351 ID AAY XX AC AAY	10-	Han	MBF ang neu imm	Homo	MO	13	05-	-90	SD)	TOS	WPI;	Inl	C18	A	Fre	tumo	ass	ti.	ne	rh	syr	als Kap	Sec	Query Match	Best Lo Matches
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EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120

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121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY23149) without the 17 N-terminal amino acids.

A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of unglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The not secretic with meovascularization (e.g. diabetic neuropathy, retrolners it brophasia, trachoma, neovascularization (e.g. diabetic neuropathy, retrolners incontact lens overwear, crohn's disease other than a tumor that is neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, Crohn's disease, non-immune inflammation, systemic vasculitis, acleroderma, Sjorgen's goodpasture's syndrome, systemic vasculitis, acleroderma, Sjorgen's syndrome, sarcoldosis and primary billary cirrhosis). The method may warded the used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                     MBP-calreticulin; maltose binding protein; anglogenesis; inhibition; endothelial cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inhibiting andothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                              SASFEPFSNKGQTLVVQFTVKHEQNIDCGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
           (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                Recombinant human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 4; Puge 80-81; 99pp; English.
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                                                                                                                                      AAY92350 standard; Protein; 400
                                                                                                                                                                                                                                                                                                                                                                               99WO-US23240.
                                                                                                                                                                                                                                                                                                                                                                                                      98US-0103438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tosato G, Pike SE, Yao L;
                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400 AA;
                                                                                                                                                                                                                                                                                                                             WO200020577-A1.
                                                                                                                                                                                                                                                                                                                                                                                                      06-ocr-1998;
                                                                                                                                                                                                                                                                                                                                                                               05-OCT-1999;
                                                                                                                                                                                      10-AUG-2000
                                                                                                                                                                                                                                                                                                       Homo saptens
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Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autosmutibodies, for identification of autoimmune diseases. These epitopes are AAs 24.36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60 kD autoantigen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 417;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA sequences encoding antigenic epitope(s) of Ro (
- used in immunoassays to detect rheumatic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 180; DB 10;
100.0%; Pred. No. 4.2e-187;
Live 0; Mismatches 0;
                                                                                                                                                                                Sjorens syndrome; systemic lupus erythematosus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sontheimer RD, Capra JD, McCauliffe DP;
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AAP92276 standard; protein; 417
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                                                                                         (first entry)
                                                                                                                                    60 kD Ro (Ro/SSA) antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.
Best Local Similarity 100.
Matches 180; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1989-309537/42.
N-PSDB; AAP92276.
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                                                                                                                                                                                                                                                                                                                                                         22-MAR-1989;
                                                                                         23-FEB-1990
                                                                                                                                                                                                                                                                                                                                                                                                    22-MAR-1988;
                                                                                                                                                                                                                                                                    W08909273-A
                                                                                                                                                                                                                                                                                                                05-0CT-1989
                                                                                                                                                                                                                         Synthetic.
                                             AAP92276;
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Gaps

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Length 400; Indels

Query Match 100.0%; Score 180; DB 21; Best Local Similarity 100.0%; Pred. No. 4.1e-187; Matches 180; Conservative 0; Mismatches 0;

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A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).

Pragments of calreticulin causes at least 40% inhibition of angiogenesis,
tumor growth and/or endothelial cell growth (claimed). The method may be
used for inhibiting angiogenesis in a patient. The angiogenesis is
associated with a disease other than a tumor that is associated with
neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia,
trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune
contactnessolarosclerosis, excessive wound repair, retinal
neovascularization, macular degeneration, corneal graft rejection,
contact lens overwear, Crohn's disease, non-immune inflammation,
rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
Goodpasture's syndrome, systemic vasculitis, soleroderma, Sjorgen's
syndrome, sarcoidosis and primary biliary cirrhosis). The method may
                                                                                                                                                                                                                                                                                                               MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial call; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     endothelial cell growth and angiogenesis using calreticulin, suppressing tumor growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                          AAY92349 standard; Protein; 417 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kaposi's sarcoma (claimed).
                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                           Human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200020577-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-OCT-1998;
                                                                                                                                                                           10-AUG-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inhibiting euseful for s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tosato G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seguence
                                                                                                           AAY92349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
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AAY 92349

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AAY 9

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                             Gaps
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  Length 417;
                           Indels
100.0%; Score 180; DB 21;
100.0%; Pred. No. 4.2e-187;
ive 0; Mismatches 0;
            Local Similarity 100.
Les 180; Conservative
  Query Match
             Best Loca
Matches
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1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60

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SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120 61

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This sequence is calreticulin, a homologue of C1q and collectin receptor (CC1qR). The invention relates to the use of a cC1qR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cC1qR binding domain in a medicament to inhibit CUB functionality. The cC1qR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor is used to treat complement activation involved in the initiation and maintenance of inflammation, for example in myccardial infarction, brain ischaemia (stroke), gut ischaemia, rheumatoid arthritis, systemic lupus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                               121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                  79 TVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNV 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78 sasfepfsnkgqtlvvqftvkheqnidcgggyvklfpnsldqtdmhgdseynimfgpdic 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              erythematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSASFEPFSNKGQTLVVQF 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Use of a cClqR binding domain - to modulate complement ubiquitin (CUB) functionality.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 26-27; 31pp; English.
                                                                                                                                                                                                                                                                                                AAY00927 standard; Protein; 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    low molecular weight molecule.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97GB-0016998.
                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYLE-) UNIV LEICESTER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-180404/15.
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nes 162; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9907406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-AUG-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-FEB-1999.
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Matches
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                                                                                                                                                                                                                                                             AAY00927
                                                                                                                                                                                                                                                                                                    NOT COURT OF COURT OF
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endothelial cell; anti-angiogenic; neuroprotective; antidiabetic;
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                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 AA;
                                                                                                                                    WO200020577-A1
                                                                              Homo sapiens.
                                                                                                                                                                                                                05-OCT-1999;
                                                                                                                                                                                                                                                    06-OCT-1998;
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                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                Tosato G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is calreticulin. It and a C-domain derived peptide (AAW06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type opds. are administered either parenterally, intravenously or via a cathefer and can target areas of vascular damage to inhibit or prevent restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            104 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 163
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inhibition of restenosis in patients - using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same activity.
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139 LINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                      42.8%; Score 77; DB 18; 1
1larity 100.0%; Pred. No. 3.1e-75;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Recombinant human calreticulin residues 120-180.
                                                                                                                                                                                                                                                                                          calreticulin; C-domain; restenosis; inhibitor.
                                                                                                                                    AAW11156 standard; peptide; 401 AA
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95US-0442844.
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                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lucas A, Michalak M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYAL-) UNIV ALBERTA.
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                                                                                                                                                                                                                                                                                                                                Homo sapiens
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17-MAY-1995;
                                                                                                                                                                                                              31-MAY-1997
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                                                                                                                                                                                                                                                    Calreticulin
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                                                                                                                                                                        AAW11156;
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Matches
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A novel method of inhibiting endothelial cell growth comprises

contacting the cells with calreticulin (or its fragments/variants).

Cragments of calreticulin causes at least 40% inhibition of anglogenesis,

tumor growth and/or endothelial cell growth (claimed). The method may be

cused for inhibiting anglogenesis in a patient. The anglogenesis is

associated with a disease other than a tumor that is associated with

cused for inhibiting anglogenesis in a patient. The anglogenesis is

neovascularization (e.g. diabetic neuropathy, retrolental fibroplasis,

trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune

inflammation, atherosclerosis, excessive wound repair, retinal

contact lens overwear, Crohn's disease, non-immune inflammation,

rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,

syndrome, sarcoidosis and primary biliary cirrhosis). The method may

also be used for treating/inhibiting tumor growth especially

Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MBP-calreticulin; maltose binding protein; anglogenesis; inhibition; endothelial cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
cytostatic; dermalogical; immunosuppressive; antlinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120 CGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 33.9%; Score 61; DB 21; Length 61 Best Local Similarity 100.0%; Pred. No. 1.4e-58; Matches 61; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Recombinant human calreticulin residues 121-180.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful for suppressing tumor growth
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This sequence comprises recombinant human calreticulin (AAY92350)
missing the N-terminal 120 amino acids.

A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of
mathod may be used for inhibiting angiogenesis in a patient. The
angiogenesis, tumor growth and/or endothelial cell growth (claimed). The
method may be used for inhibiting angiogenesis in a patient. The
angiogenesis is associated with a disease other than a tumor that is
associated with neovascularization (e.g. diabetic neuropathy, retrolental
fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas,
immune inflammation, atherosclarosis, excessive wound repair, retinal
neovascularization, macular degeneration, corneal graft rejection,
contact lens overwear. Crohn's disease, non-immune inflammation,
rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
Goodpasture's syndrome, systemic lupus erythromatosus, thyroiditis,
syndrome, sarcoldosis and primary biliary cirrhosis). The method may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MBP-calreticulin; maltose binding protein; anglogenesis; inhibition; endothelial cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                   Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33.3%; Score 60; DB 21; Length 280; 100.0%; Pred. No. 6.5e-57; live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Recombinant human calreticulin residues 132-180.
                                                                                                               (USSH ) US DEPT HEALTH & HUMAN SERVICES.
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                   99WO-US23240.
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Best Local Similarity
                                                                                                                                                            Pike SE,
                                                                                                                                                                                                        WPI; 2000-303767/26
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                   05-0CT-1999;
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                                                                 36-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasis, trachoma, neovascular glaucoma, psoriasis, anglofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial call; anti-angiogenic; neuroprotective; antidiabetic; cytoStatic; dermalogical; immunosuppressive; antinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Raposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A novel method of inhibiting endothelial cell growth comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 60;
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Best Local Similarity 100.
Matches 60; Conservative
                                                                                                                                                                                                                                                                                                                         Tosato G, Pike SE,
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                   Homo sapiens.
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                                           Synthetic.
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a cClqR binding domain - to modulate complement ubiquitin
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ses 36; Conservative
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             (CUB) functionality
                                                                                                                                                                                                                                                                 122 AA;
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Matches
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ID AAY0
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                                                                                                                                                               contacting the cells with calreticulin for its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tragment growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasis, trachoma, neovascular glaucoma, psoriasis, anglofibromas, immune inflammation, atheroscierosis, excessive wound repair, retinal neovascularization, mecular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, remained arthritis, systemic lupus erythromatosus, thyroiditis, docopasture's syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, sarcoidosis and primary biliary cirrhosis). The method may when he can be add for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clq and collectin receptor; cclqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease;
                                                                                Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
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                                                                                                                                                     A novel method of inhibiting endothelial cell growth comprises
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1.2e-45;
thes 0;
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(USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                         Claim 4; Page 82-83; 99pp; English
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                                                                                                                                                                                                                                                                                                                                                                  Kaposi's sarcoma (claimed)
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see 49; Conserva
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                          Pike SE,
                                                    WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                            49 AA
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Rest Local Si
Matches 499
                           Tosato G,
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This sequence is a clq and collectin receptor (cclqR) binding domain in a medicament to effect complement ubiquitin (cUB) functionality, and an inhibitor of the cclqR binding domain in a medicament to effect complement ubiquitin (cUB) functionality, and an inhibitor of the cclqR binding domain in a medicament to inhibit cuB functionality. The cclqR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor, is used to treat complement activation involved in the inhibitor and maintenance of inflammation, for example in myocardial infarction, brain ischaemia (stroke), gut ischaemia, rheumatoid arthritis, systemic lupus erythematosus, burns, immune complex nephiltis, and to treat amyloid plaques in Alzhafmer's disease. The use of cclqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
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100.0%; Pred. No. 3.6e-31;
tive 0; Mismatches 0;
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Claim 9; Page 23; 31pp; English.
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functionality. The cClqR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor is used to treat complement activation involved in the initiation and maintenance of inflammation, for example in myocardial infarction, brain ischaemia (Stroke), gut ischaemia, rheumatoid arthritis, systemic lupus elythematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.0%; Score 36; DB 20; Length 122; 100.0%; Pred. No. 3.6e-31; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                          low molecular weight molecule.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-GB02430.
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nes 36; Conservative
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low molecular weight molecule.

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The sequence was deduced from a cDNA clone lambda RAL-1 prepd. If some states of from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically bind to protein prepd. From induced cultures of lambda RAL-1 lysogens recognise a single polypeptide of mol. Wt. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. Wt. 39,130. If the antigen is not subject to post-translational processing this suggests that most of the coding sequence is present. The three repeats are highly hydrophilic regions likely to be exposed on the surface of the antigen and highly immunogenic. Recombinant antigen expressed by the clone can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA encoding Onchocerca volvulos antigen - used to express recombinant antigen for vaccine against onchocerciasis or river
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                                                                                                                                                                                                                                                                                                                             River blindness; onchocerciasis; vaccine; antigen; parasite.
                                                    Length 122;
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                                                                                                                                                                                                                                                                                                 Partial sequence of Onchocera volvulus 42 kD antigen.
                                        DB 20; Le.
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                                                    10.6%; Score 19; 100.0%; Pred. No.
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/label= repeat unit
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100.08; Fr.
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                                                  Query Match 10.6%
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Matches 19; Conservative
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           122 AA;
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Region
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XX OS
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XX Sequence
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Sequence 336 AA;

Querry Match 10.6%; Score 19; DB 12; Length 336; Best Local Similarity 100.0%; Pred. No. 2.6e-12; Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps

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Search completed: January 14, 2002, 08:50:53 Job time: 124 sec

January

Run on:

OM protein

Perfect score:

Sequence:

Scoring table:

Searched:

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MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
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AAR45155
AAW35905
AAR28348
AAR28348
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AAG30997
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AAY81727
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 AAY92352;
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 RESULT
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24.038 Million cell updates/sec
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Compugen Ltd
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Listing first 45 summaries
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Post-processing:

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Peptide Seq ID No: Cell adhesion reco N-CAM heparin bind Cell adhesion reco

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Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth

Pike SE,

Tosato G,

WPI; 2000-303767/26

Recombinant human Recombinant delta-Flea calreticulin Partial sequence o Human MBP-calretic

AAY92349 AAY92354 AAY92355 AAW04171 AAR12312

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Query Match

Score

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Calreticulin.

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useful for
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                                          contacting the cells with calreticulin (or its fragments/variants).

Contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with creatment of g. disbetic neovuscularization (e.g. disbetic neovuscularization (e.g. disbetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, anglofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal contact lens overwear, Croim, 8 disease, non-immune inflammation, sarcoidosis and primary bilary cirrhosis). The method may ulso be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A novel mathod of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Frugments of calreticulin causes at least 40% inhibition of anglogenesis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MRP-calreticulin; maltose binding protein; vasostatin; N-terminal; undicogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antilinflammatory; anti-atherosclerotic; quastrointestinal; anti-arthritic; ophthalmic.
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                                                                                                                                                                                                                                                                                                                                                                              Length 61;
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100.0%; Pred. No. 2.5e-16;
Live 0; Mismatches 0;
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               Claim 4; Page 82-83; 99pp; English
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Matches 27; Conserv
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Synthetic.
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                                                                                                                                                                                                                                                                                                                                Seguence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MBP-calreticulin, maltose binding protein; anglogenesis; inhibition; endothelial cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
tumor growth and/or endothelial cell growth (claimed). The method may used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atheroacclerosis, accessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, doodpasture's syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
      The method may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                     DB 21; Length 180;
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 151; DB 21;
11arity 100.0%; Pred. No. 9e-16;
Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Recombinant human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 4; Page 80-81; 99pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92350 standard; Protein; 400
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                               (claimed)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
les 27; Conserv
                                                                                                                                                                                                                                                                                                       180 AA;
                                                                                                                                                                                                                                                               Kaposi's sarcoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200020577-A1
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us-09-828-000-5.rag

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Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24.36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                                                                           DNA sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen - used in immunoassays to detect rheumatic disease
                                                                                                                                                        Sjorens syndrome; systemic lupus erythematosus
                                                  AAP92276 standard; protein; 417 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 2; 88pp; English.
                                                                                                                                                                                                                                                                                                                  (TEXA ) UNIV OF TEXAS SYST.
                                                                                                                               60 kD Ro (Ro/SSA) antigen.
                                                                                                                                                                                                                                                                                                                                            Sontheimer RD, Capra JD,
                                                                                                                                                                                                                                                                                                                                                                      WPI; 1989-309537/42.
                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAP92276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Calreticulin.
                                                                                                                                                                                                                                                              22-MAR-1989;
                                                                                                                                                                                                                                                                                        22-MAR-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-MAY-1999
                                                                                                    23-FEB-1990
                                                                                                                                                                                                            WO8909273-A
                                                                                                                                                                                                                                      05-OCT-1989
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                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY 00927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antigens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seguence
                                                                           AAP92276;
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                                       AAP92276
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                          RESULT
                                                                 Db
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence is calreticulin. It and a C-domain derived peptide (AAW06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type cpds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage to inhibit or prevent restenosis.
neovascularization, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inhibition of restenosis in patients – using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same
                                                                                                                                                                                              .;
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                                                                                                                                                                     Length 400;
                                                                                                                                                                                              Indels
                                                                                                                                                                 Query Match 100.0%; Score 151; DB 21; Best Local Similarity 100.0%; Pred. No. 2.3e-15; Matches 27; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 151; DB 18;
Pred. No. 2.3e-15;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                         calreticulin; C-domain; restenosis; inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Applicat has Pet
                                                                                                                                                                                                                                    120 cgpgtkkvhvifnykgknvlinkdirc 146
                                                                                                                                                                                                                       1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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                                                                                                                                                                                                                                                                                                                 AAW11156 standard; peptide; 401
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                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Michalak M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYAL-) UNIV ALBERTA.
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Best Local Similarity
Matches 27; Conserv
                                                                                                                              400 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401 AA;
                                                                                                                                                                                                                                                                                                                                                                                               Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9636643-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-MAY-1996;
17-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                     31-MAY-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lucas A,
                                                                                                                              Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                           AAW11156;
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McCauliffe DP;

89WO-US01213.

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                                                                                                                                                                                                                                                                                                                      CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                                                                                                                                                                                                                                                    Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation: inflammation.
                                                                      Gaps
                                                                   .;
0
                                         Length 417;
                                                                     Indels
                                        Score 151; DB 10;
Pred. No. 2.4e-15;
Mismatches 0;
                                                                                                             1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                               AA
                                           100.08; Pt.
100.08; Pt.
0;
                                                                                                                                                                                            AAY00927 standard; Protein; 417
                                         100.08;
                                                                                                                                                                                                                                                    (first entry)
                                                                      Conservative
                                         Query Match
Best Local Similarity
417 AA;
                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
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Gaps

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Indels

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Conservative

CGPGTKKVHVIFNYKGKNVLINKDIRC 27

120 П

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A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, anglofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear. Crohn's disease, non-immune inflammation, rheumation arthritis, systemic lupus erythromatosus, thyroiditis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MBP-calreticulin, maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-atherosclerotic; gastrointestinal; anti-atheritic; ophthalmic.
                                                                                                                                                                   Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 151; DB 21;
100.0%; Pred. No. 2.4e-15;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Recombinant human calreticulin residues 121-180.
                       (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                             Disclosure; Page 79-80; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92354 standard; Protein; 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (USSH ) US DEPT HEALTH & HUMAN
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                                                                  Yao L;
                                                                                                                            N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tosato G, Pike SE, Yao L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27; Conservative
                                                              Pike SE,
                                                                                                       WPI; 2000-303767/26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200020577-A1.
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Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-OCT-1999;
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                                                                ပ်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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                                                                  Tosato
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                                                                                                                                                                                                                                                                                                                                           This sequence is calreticulin, a homologue of Ciq and collectin receptor (CCIqR). The invention relates to the use of a cCiqR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cCiqR binding domain in a medicament to inhibit can functionality. The cCiqR binding domain, or its inhibitor, can be used to complement activation involved in the initiation and maintenance of inflammation, for example in myccardial infarction, brain isolated in the initiation of stroken, qut ischaemia, rheumatold arthritis, systemic lupus erythematogus, burns, immune complex nephritis, systemic lupus plaques in Alzhaimer's disease. The use of CCiqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MBP-calreticulin; maltose binding protein; anglogenesis; inhibition; endothelial call; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                             Use of a cClqR binding domain - to modulate complement ubiquitin (CUB) functionality.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Score 151; DB 20;
; Pred. No. 2.4e-15;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.17
/label~ signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label - mature_protein
                                                                                                                                                                                                                                                                                                             Disclosure; Page 26-27; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY92349 stundard; Protein; 417 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ow molecular weight molecule.
                                        98WO-GB02430.
                                                                               97CB-0016998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Bost Local Similarity 100.0
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human MBP-calreticulin.
                                                                                                                      (UYLE-) UNIV LEICESTER
                                                                                                                                                                                                      WPI; 1999-180404/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                417 AA;
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                                                                               12-AUG-1997;
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                                                                                                                                                               Schwaeble W;
18-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-APR-2000.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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Length 417; Indels

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RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                           contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. disbetic neuropathy, retrolental fibroplasia, trachoma, neovascularization (e.g. disbetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, reumatoid arthritis, systemic lupus erythromatosus, thyroiditis, contact lens verwear, systemic lupus erythromatosus, thyroiditis, contact macoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inhibiting endothelial cell growth and angiogenesis using calreticulin,
         Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence comprises recombinant human calreticulin (AAY92350)
                                                                                                                                                                                                                                                                                                                                 .
0
                                                                inhibiting endothelial cell growth comprises
                                                                                                                                                                                                                                                                                                       Score 142; DB 21; Length 60;
Pred. No. 6.4e-15;
Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                              100.0%; Prea. ...
                                                                                                                                                                                                                                                                                                        94.0%; Score 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 useful for suppressing tumor growth
                       suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Recombinant delta-120 calreticulin.
                                                                                                                                                                                                                                                                                                                                                                  1 gpgtkkvhvifnykgknvlinkdirc 26
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92355 standard; Protein; 280 AA
                                                                                                                                                                                                                                                                                                                                                     2 GPGTKKVHVIFNYKGKNVLINKDIRC 27
                                           Claim 4; Page 85; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 4; Page 86; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-US23240.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yao L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tosato G, Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 26; Conserv
                                                                  method of
                                                                                                                                                                                                                                                                     60 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200020577-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY92355;
                                                                                                                                                                                                                                                                      Sequence
                                                                  A novel
                       nseful
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A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear. Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
                                                                                                                                                                                                                                                                                                                                                                                                                 Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Flea calreticulin protein PCtCall589 (AAW04171) is a calcium-binding protein found in the salivary glands of Ctenocephalides felis. Its amino acid sequence was deduced from a cDNA clone (AAT39516) obtd. from a salivary gland CDNA library. Recombinant PCtCall589 can be produced in host cells transformed with a vector carrying calreticulin nucleic acids. Calreticulin alters the blood feeding behaviour of haematophagous insects and can be administered to an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Haematophagous insect calreticulin protein – used to reduce insect infestation and desensitise patients to allergic dermatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Calreticulin; flea; haematophagous insect; allergic dermatitis; vaccine; therapy; PCtCal403.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 142; DB 21;
Pred. No. 3.9e-14;
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0
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Mismatches
missing the N-terminal 120 amino acids.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW04,171 standard; Protein; 403 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94.0%;
100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Flea calreticulin PCtCal403.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95US-0401509
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ctenocephalides felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rushlow KE, Stiegler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1996-442861/44.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 26; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
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N-PSDB; AAT39517.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9628469-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-SEP-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW04171;
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blindness
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                                                                                                   Query Match
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Matches
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                                                                                                          Gaps
animal to reduce infestation. It reduces calreticulin activity in insects, so reducing the insect burden on an animal. Calreticulin can be used to elicit an immune response, thereby desensitising an animal to allergic dermatitis caused by fleas, mosquitoes or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The sequence was deduced from a cDNA clone lambda RAL-1 prepd. from RNA isolated from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically bind to protein prepd. from induced cultures of lumbda RAL-1 lysogens recognise a single polypeptide of mol. wt. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. wt. 39.130. If the antiqee is not subject to post-translational processing this suggests that most of the coding sequence is present. The three
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA encoding Onchocerca volvulos antigen – used to express recombinant antigen for vaccine against onchocerciasis or river
                                                                                                         ö
                                                                                      Score 139; DB 17; Length 403; Pred. No. 1.7e-13; 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                       River blindness; onchocerclasis; vaccine; antigen; parasite.
                                                                                                                                                                                                                                                   Partial sequence of Onchocera volvulus 42 kD antigen.
                                                                                                                                                                                                                                                                                                                                                                    /note- "hydrophilic"
195..201
/label- repeat unit
/note- "hydrophilic"
                                                                                                                                     /lubel- repeat unit
                                                                                                                                                                                                                                                                                                                             /label repeat unit/note "hydrophilic"
                                                                                                                          1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                            AAR12312 standurd; Protein; 336 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Fig 7; 20pp; English.
                                                                                     92.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       88US-0214264.
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                                                                                                                                                                                                                                 (first entry)
                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                ..183
                                                                                                                                                                                                                                                                                                                     160..166
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                                                                                                                                                                                                                                                                                                                                         /note
177..1
                                                                                                                                                                                                                                                                                          Onchocerca volvulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1991-185179/25.
                                                                                     Query Match
Hent Local Similarity
Matches 25; Conserv
                                                         403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAQ11987.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-JUN-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JUN-1988;
                                                                                                                                                                                                                                                                                                                                                                                                               USS021342-A.
                                                                                                                                                                                                                                  29-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Greene BM,
                                       Culicoides.
                                                                                                                                                                                                                                                                                                                                                                                                                                   04-JUN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                blindness.
                                                          Seguence
                                                                                                                                                                                                               AAR12312;
                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                             Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-atthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 endothelial cell growth and angiogenesis using calreticulin, suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immmune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
repeats are highly hydrophillic regions likely to be exposed on the surface of the antigen and highly immunogenic. Recombinant antigen expressed by the clone can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                            Length 336;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                         80.1%; Score 121; DB 12;
77.8%; Pred. No. 9.2e-11;
iive 3; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Recombinant human calreticulin residues 132-180.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 21; Conserv
                                                                                                                                                                                                                                                        336 AA;
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useful for
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Sequence

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AAB66341;

RESULT 13

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AAB66341

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Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter; termination sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                            New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells \cdot
                                                                                                calcium binding; er; endoplasmic reticulum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Arabidopsis thaliana protein fragment SEQ ID NO: 28351.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAG24609 standard; Protein; 312 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 1B; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                              (PION-) PIONEER HI-BRED INT INC
                                                                                                Castor bean; calreticulin; calc calnexin; promoter; resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 54.3%;
                                                                                                                                                                                                                                                                               96US-0675816
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                                                                 Castor bean calreticulin.
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N-PSDB; AAF29755.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells -
                                                                                                                                                                                                                                                                                                                                                            calreticulin; calcium binding; er; endoplasmic reticulum;
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                                                Length 49;
                                            Score 82; DB 21; Length 49; Pred. No. 1.2e-05; 0; Mismatches 0; Indels
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                                    54.3%; Scor.
100.0%; Pre
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N-PSDB; AAF29741, AAF29742.
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49
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                                                                                                                                                                                                                                                                                                                                                                Castor bean;
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AAB66343 standard; Protein; 415 AA.

Sequence

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PR 16-JUL-1999; 99US-0144005.

PR 16-JUL-1999; 99US-0144005.

PR 19-JUL-1999; 99US-0144331.

PR 19-JUL-1999; 99US-0144331.

PR 19-JUL-1999; 99US-0144331.

PR 22-JUL-1999; 99US-0144331.

PR 21-JUL-1999; 99US-0144331.

PR 22-JUL-1999; 99US-014508.

PR 22-JUL-1999; 99US-014508.

PR 22-JUL-1999; 99US-014508.

PR 22-JUL-1999; 99US-014508.

PR 22-JUL-1999; 99US-014510.

PR 22-JUL-1999; 99US-014508.

PR 22-JUL-1999; 99US-014510.

PR 23-JUL-1999; 99US-014510.

PR 23-JUL-1999; 99US-01499.

PR 23-JUL-199

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; Query Match 52.3%; Score 79; DB 21; Length 312; Best Local Similarity 55.6%; Pred. No. 0.00032; Matches 15; Conservative 1; Mismatches 11; Indels 1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27 ò

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	Human vasostatin (Recombinant human	60 kD Ro (Ro/SSA)	Human MBP-calretic	Calreticulin. Hom	Calreticulin. Hom	Flea calreticulin	Human secreted pro	Partial sequence o	Castor bean calret	Castor bean calret
	ID		AAY92350	AAP92276	AAY92349	AAY00927	AAW11156	AAW04171	AAB32385	AAR12312	AAB66341	AAB66343
	DB	21	21	10	21	20	18	17	21	12	22	22
	Query • Match Length DB]	180	400	417	417	417	401	403	385	336	415	415
æ	Query Match	100.0	100.0	100.0	100.0	99.5	94.9	72.1	65.0	55.8	54.3	54.3
	Score	971	971	971	971	996	921	700	631	541.5	527	527
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thalia	thalia	-	thalia	thalia	thalia	human	human		enviro	equence.	human	thalia	thalia	thalia	protein f	thalia	•	thalia	_	thalia	thalia	bindin				thalia	Endoplasmic	ate can	ted pro		tha	thalia	protein f
Arabidopsis	Arabidopsis	Arabidopsis	Arabidopsis	Arabidopsis	Arabidopsis	Recombinant	Recombinant	Recombinant	thaliana	Calnexin se	Recombinant	Arabidopsis	Arabidopsis	Arabidopsis	Zea mays pr	Arabidopsis	Arabidopsis	Arabidopsis	Castor bean	Arabidopsis	idopis	Human cClgR	Rat cClgR b	e cClgR	Arabidopsis	Arabidopsis	n Endop				Arabidopsis	Arabidopsis	mays pr
Arab	Arab	Arab	Arab	Arab	Arab	Reco	Reco	Reco	A.	Caln	Reco	Arab	Arab	Arab	Zea	Arab	Arab	Arab	Cast	Arab	Arab	Huma	Rat	Mous	Arab	Arab	Human	Human	Human	Human	Arab	Arab	Zea
4608	7932	4607	7931	1660	6	2352	2354		7953	1094	2353	AAG24609	7933	AAG30998	1018	6284	6611	6610	6342	4448	4447	0924	AAY00926	AAY00925	4014	4013	AAB99168	6468	0147	0148	6285	6612	5999
AAG2460	AAG4793	AAG24	AAG47	AAG3099	AAG309	AAY923	AAY9235	AAY9235	AAY7795	AAR7109	AAY9235	AAG2	AAG4	AAG3	AAG4101	AAG2628	AAG4661	AAG4661	AAB6634	AAG0444	AAG0444	AAY0092	AAY 0	AAY0	AAG3401	AAG3401	AAB9	AAB5646	AAG0014	AAG0014	AAG2628	AAG46613	AAG2
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421	421	424	424	441	444	61	9	280	417	593	49	312	312	332	84	530	530	267	542	532	548	122	122	122	91	66	256	221	162	162	394	394	125
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ALIGNMENTS

MBP-calreticulin; maltose binding protein; vasostatin; N-terminal; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antilinflammatory; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic. Human vasostatin (calreticulin N-terminal 180 amino acids). SERVICES AAY92351 standard; Protein; 180 AA (USSH) US DEPT HEALTH & HUMAN 99WO-US23240 98US-0103438 Yao L; (first entry) Pike SE, WPI; 2000-303767/26 WO200020577-A1. Homo sapiens. 10-AUG-2000 05-OCT-1999; 06-OCT-1998; 13-APR-2000. Tosato G, Synthetic. AAY92351; AAY92351 RESULT

Inhibiting endothelial cell growth and angiogenesis using calreticulin,

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AAP92276
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Contacting the cells with calreticular cell growth comprises

Contacting the cells with causes at least 40% inhibition of angiogenesis,

tumor growth and/or endothelial cell growth (claimed). The method may be

tumor growth and/or endothelial cell growth (claimed). The method may be

the associated with a disease other than a tumor that is associated with

trachoma, necovascular glaucoma, psoriasis, andiodibromas, immune

trachoma, necovascular glaucoma, psoriasis, andioditis,

contact lons overweur, Crohn's disease, non-immune inflammation,

trhumunotid arthritis, systemic vasculitis, scleroderma, Sjorgen's

syndrome, sarcoidosis and primary biliary cirrhosis). The method may

also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MMP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial call; anti-angiogenic; neuroprotective; antidiabetic; cytoutatic; dermalogical; immunosuppressive; antilnflammatory; hepatic; anti-utherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GPSTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVFSGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                        1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFCKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                      novel method of inhibiting andothelial cell growth comprises
                                                                                                                                                                                                                                                                                                                                     Length 180;
                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                  ; Score 971; DB 21;
; Pred. No. 3.1e-99;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (USSH ) US DEPT HEALTH & HUMAN SERVICES.
 useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Recombinant human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY92350 standard; Protein; 400 AA
                         Claim 4; Page 82; 99pp; English
                                                                                                                                                                                                                                                                                                                                   100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US23240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-303767/26;
N-PSDB; AAA09346; AAA09347;
                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.0
Matches 180, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tosato G, Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200020577-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo suplens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-OCT-1999;
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                                                                                                                                                                                                                                                                                            Sequence
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calreticulin (see AAY92349) without the 17 N-terminal amino acids.
A novel method of Inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).
Fragments of calreticulin causes at least 40% inhibition of
angiogenesis, tumor growth and/or endothelial cell growth (claimed). The
method may be used for inhibiting angiogenesis in a patient. The
angiogenesis is associated with a disease other than a tumor that is
associated with neovascularization (e.g. diabetic neuropathy, retroiental
fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas,
immmune inflammation, atherosclerosis, excessive wound repair, retinal
neovascularization, macular degeneration, corneal graft rejection,
Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contact lens overwear, Crohn's disease, non-limmure infilammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFYLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                Recombinant human MBP-calreticulin comprises the sequence of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 971; DB 21;
100.0%; Pred. No. 9.4e-99;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sjorens syndrome; systemic lupus erythematosus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               McCauliffe DP;
                                                                                             Claim 4; Page 80-81; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAP92276 standard; protein; 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89WO-US01213
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-FEB-1990 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rest Local Similarity 100. Matches 180; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60 kD Ro (Ro/SSA) antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1989-309537/42.
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28-MAY-1999
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Matches 180;
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                                                                                                                                                                                     Query Match
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                                          Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                             MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothellal call; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antinilammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                            GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                   18 epavyfkeqfldgdgwtsrwieskhksdfgkfvlssgkfygdeekdkglqtsqdarfyal 77
                                                                                                                                                          1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen sed in immunoassays to detect rheumatic disease
                                                                                                                                         ;
0
                                                                                                                        Length 417;
                                                                                                                                         Indels
                                                                                                                     Score 971; DB 10;
Pred. No. 9.9e-99;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                    1..17
/label= signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label = mature_protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                            AA.
                          Disclosure; Fig 2; 88pp; English.
                                                                                                                                                                                                                                                                                           AAY92349 standard; Protein; 417
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                                                                                                                       100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                              Human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tosato G, Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-303767/26
                                                                                                                                Similarity
                                                                                              417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200020577-A1
                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inhibiting useful for
                                                                                                                                         180;
                                                                                               Sequence
                                                                                                                                                                                                                                                                                                           AAY92349;
                                                                                                                       Query Match
                                                                             antigens
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                                                                                                                                  Local
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contacting the cells with calreticulin (or its fragments/variants)

contacting the cells with calreticulin (or its fragments/variants)

contacting the cells with calreticulin (or its fragments/variants)

contacting the calls with calcased at least 40% inhibition of anglogenesis,

tumor growth and/or endothelial cell growth (claimed). The method may be

used for inhibiting anglogenesis in a patient. The anglogenesis is

associated with a disease other than a tumor that is associated with

neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia,

trachoma, neovascular glaucoma, psoriasis, angiofibromas, immmune

inflammation, atherosclerosis, excessive wound repair, retinal

neovascularization, macular degeneration, corneal graft rejection,

contact lens overwear, Crohn's disease, non-immune inflammation,

rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,

doodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's

syndrome, sarcoidosis and primary biliary cirrhosis). The method may
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 417;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 971; DB 21;
100.0%; Pred. No. 9.9e-99;
tive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     417 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Calreticulin,
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Query Match
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               This sequence is calreticulin, a homologue of Clq and collectin receptor (cClqR). The invention relates to the use of a cClqR binding domain in a madicament to affect complement ubiquitin (CUB) functionality, and an inhibitor of the cClqR binding domain in a medicament to inhibit CUB tunctionality. The cClqR binding domain, or its inhibitor, can be used to treat a human or unimal body. Particularly an inhibitor, can be used to complement activation involved in the initiation and maintenance of inflummation, for example in mycardial infarction, brain ischaemia (HITOKO), gut ischaemia, rheumatoid arthritis, systemic lupus erythematosus, burns, immune complex nephritis, and to treat amyloid plagues in Alzhaimar's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The prement sequence is calreticulin. It and a C-domain derived peptide (AAW06736) are useful for treating a patient to inhibit restenosis. The
                                                                                                                                                                                                                                                                                              61 SASFEPFSNKGOTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                               1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                       121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inhibition of restenosis in patients – using calreticulin or a
C-domain polypeptide of calreticulin or a variant with the same
                                                                                                                                                                                                                              .;
0
                                                                                                                                                                                                         Length 417;
                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                       Score 966; DB 20;
Pred. No. 3.5e-98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C-domain; restenosis; inhibitor.
                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6334
Disclosure; Page 26-27; 31pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                AAW11156 standard; peptide; 401
                                                                                                                                                     low molecular weight molecule.
                                                                                                                                                                                                       Query Match
Bost Local Similarity 99.4%;
Matches 179; Conservative
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المراجعة
المراجعة
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95US-0442844
                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Michalak M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYAL-) UNIV ALBERTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1997-012036/01.
                                                                                                                                                                         417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    calreticulin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W096.1664 3-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-MAY-1996;
17-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21 - NOV - 1996
                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW11156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lucas A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activity
                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                       AAW11156
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calreticulin-type cpds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage to inhibit or prevent restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                        SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                             1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Flea calreticulin protein PCtCal1589 (AAW04171) is a calcium-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein found in the salivary glands of Ctenocephalides felis.
Its amino acid sequence was deduced from a cDNA clone (AA739516)
obtd. from a salivary gland cDNA library. Recombinant PCtCall589
calreliculin nucleic acids. Calreliculin alters the blood feeding
behaviour of haematcphagous insects and can be administered to an
animal to reduce infestation. It reduces calreliculin acilvity in
insects, so reducing the insect burden on an animal. Calreliculin
can be used to elicit an immune response, thereby desensitising an
culicoides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Calreticulin; flea; hacmatophagous insect; allergic dermatitis;
                                                                                                                                                                                                                                 ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Haematophagous insect calreticulin protein - used to reduce infestation and desensitise patients to allergic dermatitis
                                                                                                                                                                                                                              Indels
                                                                                                                                                               Score 921; DB 18; Pred. No. 3.1e-93;
                                                                                                                                                                                                                              1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 5; Page 68-69; 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW04171 standard; Protein; 403 AA
                                                                                                                                                                               94.9%;
95.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Flea calreticulin PCtCal403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      therapy; PCtCal403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96WO-US03133
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                                                                                                                                                                                                       Best_Local Similarity 95.0
Matches 171; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rushlow KE, Stiegler GL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ctenocephalides felis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1996-442861/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HESK-) HESKA CORP.
                                                                                                      401 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAT39516;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAT39517
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW04171;
                                                                                                        Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The polynucleotide sequences given in AAC55190 to AAC55235 encode the human secreted proteins given in AAB32371 to AAB32484. Human secreted proteins have activities based on the tissues and cells the genes are expressed in. Examples of activities include: cytostatic, impunostimulant; antiproliferative; cardiant; antiarrhythmic; antiviral; antibacterial; antifungal; antiparasitic; neuroprotective; nootropic; antiinflammatory; antianglogenic; anti-HIV; and antiarteriosclerotic. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; secreted protein; cytostatic; immunostimulant; antiproliferative; cardiant; antiarrhythmic; antiviral; antibacterial; antifungal; cancer; antiparsitic; neuroprotective; noctropic; antifilammancry; anti-HIV; antiangiogenic; antiarteriosclerotic; diagnosis; immune discorder; AIDS; autoimmune disease; haematopoietic cell disorder; blood protein disorder; adammaglobulinaemia; hyperproliferative disease; Gaucher's disease; cardiovascular disorder; congenital heart defect; pulmonary atresia; arrhythmia; ischaemia; andiogenesis related disorder; Crohn's disease; atherosclerosis; neurological disease; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New human nucleic acids encoding secreted proteins, useful in the treatment, prevention or diagnosis of immune disorders (e.g. autoimmune diseases), blood protein disorders and hyperproliferative diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Moore PA;
                                                                                                                                                                                   SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                     121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                     Gaps
                                                                                                               2 PAVYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                  Human secreted protein sequence encoded by gene 15 SEQ ID NO:71.
                                                                                  5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Young PE, Ni J, Soppet DR, Florence KA, Komatsoulis G;
                                                Length 403;
                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Huntington's; infectious disease; cat-scratch disease.
                                                Score 700; DB 17;
Pred. No. 7.8e-69;
                                     72.1%; Scc. No. ...
71.7%; Pred. No. ...
23; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 11; Page 434-435; 488pp; English.
                                                                                                                                                                                                                                                                                                                                                                        AAB32385 standard; Protein; 385 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ebner R,
Olsen HS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-FEB-2000; 2000WO-US03062.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-0119468
                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                              Query Match 72.1'
Best Local Similarity 71.7'
Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (e.g. Gaucher's disease)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-543578/49.
N-PSDB; AAC55204.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lafleur DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200047602-A1.
403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                            16-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-AUG-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CA,
                                                                                                                                                                                                                                                                                                                                                                                                          AAB32385;
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polynucleotides and polypeptides, or their agonists and antagonists, can be used for treating, preventing or diagnosing immune dispaces (e.g. cancer, autoimmune dispaces), dispaces of haematopoietic cells, blood protein dispaces (e.g. agammaglobulinaemia), hyperproliferative dispaces (e.g. daucher's disease), cardiovascular disorders (e.g. congenital heart defects, pulmonary atreasis, arrhythmias, ischaemia), angiogenesis related disorders (e.g. Crohn's disease, atherosclerosis), neurological diseases (e.g. Alzheimer's disease, Huntington's chorea), infectious diseases (e.g. AIDS, cat-scratch disease and other bacterial, viral, parasitic or fungal diseases). AAC55181 to AAC55189 and AAB32370 represent sequences used in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG 123
                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124 TKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                           Length 385;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              River blindness; onchocerciasis; vaccine; antigen; parasite.
                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Partial sequence of Onchocera volvulus 42 kD antigen.
                                                                                                                                                                                                                                                                                                                                           Score 631; DB 21;
Pred. No. 3e-61;
Mismatches 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label= repeat unit
/note= "hydrophilic"
195..201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          160..166
/label= repeat unit
/note= "hydrophilic"
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/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR12312 standard; Protein; 336 AA.
                                                                                                                                                                                                                                                                                                                                                                                                      30;
                                                                                                                                                                                                                                                                                                                                                              65.0%;
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                                                                                                                                                                                                                                                                                                                                                                                   64.48;
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/label= re
                                                                                                                                                                                                                                                                                                                                                                                                        Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..183
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1991-185179/25.
N-PSDB; AAQ11987.
                                                                                                                                                                                                                                                                                                                                                                                   Sest Local Similarity
                                                                                                                                                                                                                                                                                              385 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-AUG-1991
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                                                                                                                                                                                                                                                    invention
                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                           Query Match
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Region
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The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and
                                                                                              The present invention provides the protein and coding sequences for the castor beam calreticulin protein and the calreticulin promoter sequence. In addition, the castor beam calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells \cdot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Castor bean; calreticulin; calcium binding; er; endoplasmic reticulum; calnexin; promoter; resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells
                                                                                                                                                                                                                                                                                                                                                                                                                    4 VYFKEQFLIXGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 415;
                                                                                                                                                                                                                                                                                                                                                                             43;
                                                                                                                                                                                                                                                                                                                                       54.3%; Score 527; DB 22; 55.3%; Pred. No. 1e-49;
                                                                                                                                                                                                                                                                                                                                                                             31; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ¥
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                                                            Claim 1; Fig 3; 45pp; English.
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                                                                                                                                                                                                                                                                                                                                                                             99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Castor bean calreticulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-122335/13.
N-PSDB; AAF29755.
                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                415 AA;
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                                                                                                                                                                                                                                                                                Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Castor bean; calreticulin; calcium binding; er; endoplasmic reticulum;
                                                                                                           The sequence was deduced from a cDNA clone lambda RAL-1 prepd.

from KNA isolated from nodules excised from patients infected
with O. volvulus. The N-terminal is incomplete, however Abs
which specifically bind to protein prepd. from induced cultures
of lambda RAL-1 lysogens recognise a single polypeptide of mol.

W. 42.000 in extracts of adult worms. Analysis deduced sequence
unquents that it encodes a protein of mol. wt. 39.130. If the
unquents that it encodes a protein of mol. wt. 39.130. If the
unquents that it encodes a protein of mol. wt. 43.000 in extracts of adult worms. Analysis deduced sequence
unquents that it encodes a protein of mol. wt. 39.130.

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the protein of the antique of the parasite to proliferate and may be
used at the basis for a vaccine against onchocerciasis or river
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DNA encoding Onchocerca volvulos antigen – used to express recombinant antigen for vaccine against onchocerciasis or river
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68.5%; Pred. No. 1.9e-51;
iive 21; Mismatches 23;
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                                                                            Disclosure; Fig 7; 20pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAH66341 standard; Protein; 415
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es 98; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                  336 AA;
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16-JUL-1999;
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 3;
                                                                                                                                                                                                                                                                                                            Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter; termination sequence.
                                                                                                                                              SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                       promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote expression of foreign genes, particularly resistance genes, in plant
                                                                                            Gaps
                                                                                                                     4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                              121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
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                                                                        54.3%; Score 527; DB 22; Length 415; 55.3%; Pred. No. 1e-49; Live 31; Mismatches 43; Indels
                                                                                                                                                                                                                                                                                             Arabidopsis thaliana protein fragment SEQ ID NO: 28350
                                                                                                                                                                                                                                           AAG24608 standard; Protein; 421 AA
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990S-012348
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                                                                       Query Match
Best Local Similarity 55.39
Matches 99; Conservative
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PR 27-JUL-1999 90us-0145918

PR 28-JUL-1999 90us-0145918

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PR 28-JUL-1999 90us-0145918

PR 02-AUG-1999 90us-0145318

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PR 03-AUG-1999 90us-0147361

PR 13-AUG-1999 90us-0147361

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PR 13-AUG-1999 90us-0147361

PR 28-AUG-1999 90us-0147720

PR 28-AUG-1999 90us-0147739

PR 28-AUG-1999 90us-0154039

PR 28-AUG-1999 90us-01554018

PR 28-SEP-1999 90us-0157717

PR 28-SEP-1999 90us-01554018

PR 28-SEP-199

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                                                                                   Query Match 52.5%; Score 510; DB 21; Length 424; Best Local Similarity 53.9%; Pred. No. 7.8e-48; Matches 97; Conservative 30; Mismatches 47; Indels
99US-0160981.
99US-0160989
99US-0161404.
99US-0161405.
99US-0161359.
99US-0161360.
99US-0161361.
99US-0161920.
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14; Indels

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86.0%; Score 835; DB 13; 83.9%; Pred. No. 2.7e-71;

Query Match 86.0 Best Local Similarity 83.9 Matches 151; Conservative

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Pfam: PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN; 1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
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EMBL, D78589; BAA11425.1;
InterPro; IPR000886; ER_target.
InterPro; IPR01580; Calreticulin.
                                                                                        PubMed - 1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-FEB-1997 (TrEMBLrel. 02, 01-FEB-1997 (TrEMBLrel. 02, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 frog, Rana rugosa.";
FEBS Lett. 387:27-32(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                     Best_Local Similarity 85.2
Matches 144; Conservative
 Xenopodinae; Xenopus
                                                      SEQUENCE FROM N.A.
                                                                                      MEDLINE-93074997;
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                     NCBI_TaxID=8355
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                                                                        FISSUE-BRAIN;
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Eukaryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplysidae; Aplysia.
NCBI_TaxID-6500;
                                                                    SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                     121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                         133 GPPTKKVHVIEQYKKKNIQINKDIRCKDDSFTHLYTLIVRPDNTYEVKIDNSKVESGSLE 192
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                13 BPAVYEKEEFTDGDGWTQRWVESKHKTDYGKFKLSAGKFYGDSEKDGLQTSQDARFYAM 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.

MEDLINE-93998937; PubMed 1463604;

MEDLINE-93998937; PubMed 1463604;

Mennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;

"Long-term senstitzation training in Aplysia leads to an increase calreticulin, a major presynaptic calcium-binding protein.";

Novron 9:1013-1024(1992).

EMBL; 851299; AAB24569.1; -

InterPro; IPR000886; ER.target.

InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JAN-1998 (TrEMBLrel. 17, Last annotation update)
CALRETCULIN (FRAGMENT).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Amphibiu; Butrachla; Anura; Mesobatrachla; Pipoldea; Pipidae;
EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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PRINTS; PR00626; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.REPEAT; 3.
PROSITE; PS00014; BR_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                          01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 82.8%; Score 804; DB 5; Best Local Similarity 79.4%; Pred. No. 2.3e-68; Matches 143; Conservative 18; Mismatches 17.
                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
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Q26268;
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72 QTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIF 131
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
Ranidae; Rana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE 96234004; PubMed=8654561;
Yamamoto S., Nakamura M.;
"Calnexin: its molecular cloning and expression in the liver of
Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                     Length 343;
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"Strong expression of the calreticulin gene in the liver of
rugosa Tadpoles.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 QYKKKNLQINKDIRCKDDSFTHLYTLIVRPDNTYEVKIDNSKVESGSLE 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               132 NYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                  40105 MW; 3E7DDAFA33B91DE1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rana rugosa (Frog).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
NCBI_TaxID=8410;
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Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                82.1%; Score 797; DB 13;
85.2%; Pred. No. 8.7e-68;
ive 12; Mismatches 13;
  Biochem. J. 287:579-581(1992).

DR EMBL; X67598; CAA47867.1;

DR PRIMES; PRO01580; Calreticulin.

Prodon: PF00262; Calreticulin; 1.

DR PRIMES; PR00666; Calreticulin; 1.

DR PROSITE; PS00803; CALRETICULIN.

DR PROSITE; PS00804; CALRETICULIN.

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SEQUENCE 343 343
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                                                                                                                                                                    19 KPAVYFQEEFGDGDAWKERWIQSKHKSDYGQFKLSAGKFYGDEEKDKGLQTSQDAKFYAH 78
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULN.
Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii: Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes: Cyprinidae; Rasborinae; Danio.
NCBL_TaxID=7955;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1)
Sublect FROM N.A.
Rubinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.;
Subinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.;
Genes Dependent on Zebrafish cyclops Function Identified by AFLP
Differential Gene Expression Screen.";
Genesis 0:0-0(1999).
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                                                                               82.0%; Score 796; DB 13; Length 419; 80.6%; Pred. No. 1.4e-67;
                                                                                                                  Indels
CALRETICULIN_REPEAT; 3.
ER_TARGET; UNKNOWN_1.
; 48658 MW; 2C857036769673BF CRC64;
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PRINTS: PR00626; CALRETICULIN.
PROSOM: PR001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN.; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN 1.
SEQUENCE 417 AA; 48723 MW; 2000C5B400469
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                                                                                                                19; Mismatches
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InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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Best Local Similarity 79.7%
Matches 141; Conservative
                                                                               Query Match
Best Local Similarity 80.6'
Matches 145; Conservative
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PS00805; CP
PS00014; EP
419 AA;
PROSITE; PROSITE; SEQUENCE
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RESULT Q16893

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"A secreted calreticulin protein in Ixodid tick (Amblyomma americanum)
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Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Eucchinoidea; Echinoida; Strongylocentrotidae;
Strongylocentrotus.
NCBI_TaxID=7668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SASFEPFSNKGOTLVVQFTVKHEONIDCGGGYVKLFPNSLDOTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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O
                                                                                                             Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
Parasitiformes; Ixodida; Ixodidae; Amblyomma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78.2%; Score 759; DB 5; Length 410; 76.7%; Pred. No. 4.4e-64; Live 15; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
TISSUE-SALIVARY GLANDS;
Fain-Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; 007708; ARC79094.1. -
InterPro; IPR000886; ER_trget.
InterPro; IPR001880; Calreticulin.
                                                                                                                                                                                                                                                                                                                                Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32CCB8750A17DC54 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UNU-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                          Last sequence update)
Last annotation update)
410 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PROBOR, PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
SEQUENCE 410 AA; 47485 MW; 32CC88750A1
                              Created)
                                                                                                                                                                                                                                                         J. Insect Physiol. 41:369-375(1995)
 PRT;
                           01,
09,
17,
                                                                                                                                                          [1]
SEQUENCE OF 49-410 FROM N.A.
PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 76.73
Matches 138; Conservative
                           01-NOV-1996 (TrEMBLrel.
01-JAN-1999 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
TISSUE-SALIVARY GLANDS;
                                                                                                                                                                                     TISSUE-SALIVARY GLANDS
                                                                                                 Amblyomma americanum.
                                                                                                                                          NCBI_TaxID=6943;
                                                                                                                                                                                                                                                                                                                    D.C.;
                                                                   CALRETICULIN
                                                                                                                                                                                                                                                                                                                    Jaworski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q906S0;
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Q906S0
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14; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16 P
46833 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 70.2%;
Best Local Similarity 68.5%;
Matches 122; Conservative 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1998 (TrEMBLrel. 08, 01-NOV-1998 (TrEMBLrel. 08, 01-JUN-2001 (TrEMBLrel. 17,
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10,
17,
              Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CALRETICULIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Necator americanus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403 AA;
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01-MAY-1999
01-JUN-2001
           Matches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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076961
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79 KFTDFSNEGKDLVIQFTVKHEQKIDCGGGYAKIFPADLDQEDMHGDSPYNIMFGPDICGP 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metuzou; Arthropoda; Trācheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidaa; Drosophilidae; Drosophila.
                         Susan J.M., Just M.L., Lennarz W.J.;
"Cloning and Characterization of AlphaP Integrin and Calreticulin in Embryos of the See Urchin.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF177915; AAD55725.1;
InterPro: IPR000886; RR_target.
InterPro: IPR001880; Calreticulin.
Pfum; PR00562; Calreticulin; 1.
PRINTS; PR00566; Calreticulin; 1.
PRINTS; PR006066; CALRETICULIN.
PROSITE; PS008045; CALRETICULIN. 2; 1.
PROSITE; PS008045; CALRETICULIN. REPEAT; 3.
PROSITE; PS000146; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20 VYFEDQFADA-SWESRWVESVHKGSDAGKFKWSAGKFYGDAEQDKGIQTSQDAKFYGLSA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA
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Dodo KI, Sukoyama Y., Gamo S.;

"Drosophila melanogaster calreticulin for mRNA.";

Lubmitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.

REMBL, AMO00718; BAA68379-1;

R Flybase; FEGNO0785; Calreticulin.

R Flybase; FR000866; EX_target.

R Pfam; PF00262; calreticulin; 1.

R PROMO556; Calreticulin; 1.

R PROMO556; Calreticulin; 1.

R PROSTIE; PS00803; CALRETICULIN. 1.

R PROSTIE; PS00804; CALRETICULIN. 2; 1.

R PROSTIE; PS00805; CALRETICULIN. 2; 1.

R PROSTIE; PS00804; EX_TARGET: UKNOWN. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 421;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 75.3%; Score 731; DB 5; Length 42
Best Local Similarity 74.7%; Pred. No. 2.1e-61;
Matches 133; Conservative 19; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 CALRETICULIN,
48822 MW; 172C664F59F41F93 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  68BA49A6BB1CC427 CRC64;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Pred. No. 2.2e-58;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421 AA;
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Best Local Similarity
SEQUENCE FROM N.A
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CRC OR CG9429
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                             Signal.
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Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                18 VYFKEEFLD-DSWKERWYQSKHKSDYGEFVLSAGKYFGDATRDQGMKTSQDAKFYSRAAK 76
                                                 4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                      123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Ancylostomatoidea; Ancylostomatidae; Bunostominae; Necator.
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T. "Calreticulin is a hookworm allergen.";
Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
R BEBL; AJ06799. CAA07241;
R InterPro; IPR001880; CRITETICULIN.
R PROMES; PR00262; CALRETICULIN.
R PROMES; PR00262; CALRETICULIN.
R PROMITS; PR00626; CALRETICULIN.
R PROSITE; PS00803; CALRETICULIN.2;
R PROSITE; PS00804; CALRETICULIN.2;
R PROSITE; PS00804; CALRETICULIN.2;
R PROSITE; PS00805; CALRETICULIN.2;
R PROSITE; PS00804; CALRETICULIN.2;
R PROSITE; PS00804; CALRETICULIN.2;
R PROSITE; PS00804; CALRETICULIN.REPEAT;
R PROSITE; PS00804; CALRETICULIN.REPEAT;
R PROSITE; PS00804; CALRETICULIN.REPEAT;
R PROSITE; PS00804; CALRETICULIN.REPEAT;
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Indels
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Last annotation update)
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Last annotation update)
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Pred. No. 9.8e-57;
30; Mismatches 23;
30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       403 AA
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us-09-828-000-3.rspt

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Gaps

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Rewai T., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
R. Azakawa T., Hara A., Fukuuishi Y., Konno H., Adachi J., Fukuda S.,
R. Azakawa T., Hara A., Shibata K., Konno H., Adachi J., Fukuda S.,
R. Azakawa T., Eawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
R. Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
R. Adacta K., Matsuda H.A., Ashburner M., Batalov S., Casvant T.,
R. Fleischmann W., Gassterland T., Gissi C., King B., Kochiwa H.,
R. Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
R. Askai K., Okido T., Furuo M., Aono H., Baldarelli R., Barsh G.,
R. Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
R. Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
R. Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
R. Lyons P., Marchioni L., Mashima J., Mazzarelli J., Mombaerts P.,
R. Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
R. Wynshaw Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
R. Hayashizaki Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64 FEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG 123
                                                                                                                         64 FEP-FSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 VYFQEEFLDGERWRNRWVQSTNDSQFGHFRVSSGKFYGHKEKDKGLQTTQNSRFYAISAS 80
                                        4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFYLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                               19 VYFKEEFLD-DEWENRWIKSKHKDDFGKWEISHGKFYGDAVKDKGLKTTQDAKFYSIGAK 77
                                                                                                                                                                                                               123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                      4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
5,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32; Indels
28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B13BC4ADB11B0442 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66.0%; Score 641; DB 11;
65.0%; Pred. No. 6.4e-53;
tive 30; Mismatches 32;
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=C57BL/6J; TISSUE=TESTIS;
MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS: PRO0626; CALRETICULIN.
PRODOM: PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Interpro; IPR001580; Calreticulin.
Pfam; PF00262; calreticulin; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGD; MGI:1920566; 1700031L01Rik
26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       44198 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 409:685-690(2001).
EMBL; AK006582; BAB24660.1; -.
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Best Local Similarity 65.03
Matches 115; Conservative
Conservative
                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1700031L01RIK PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1700031L01RIK.
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Matches 122;
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                                                                                                                                                                                                                                                                                                                                                                                      906060
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Q9D9Q6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18 FDKGFSNKGKSLVIQFSVKHEQDIDCGGGYVKLMSSNVNLEDFHGETPYNIMFGPDICGP 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Dirofilaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                  Tsuji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R. "Molecular characterization of a calcium-binding protein from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2;
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MacLennan K., Hoffman W.H., Taylor D.W.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.

EMBL; AJ001621; CAA04877.1; -.

R interPro; IPR001580; Calreticulin.

P Fam; PF00262; calreticulin; 1.

R ProDom; PD001866; Calreticulin; 1.

R ProDom; PD001866; Calreticulin; 1.

R PROSITE; PS00804; CALRETICULIN_1; 1.

R PROSITE; PS00804; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70.0%; Score 680; DB 5; Length 38 68.5%; Pred. No. 1.3e-56; Live 27; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
CALRETICULIN.
E7741BF6AAFA5885 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43842 MW; 03F7642FBFF7A5B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 673; DB 5;
Pred. No. 5.8e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               375 AA.
                                                                                                                                                                                                                             MOI. Blochem. Parasitol. 97:69-79(1998).
EMBL. AF052978, AAD03405.1;
Interpro: IPR001580; Calreticulin.
Prim, Pr00262; Calreticulin; PRINTS; PR00626; CALRETICULIN.
PRODOM; P0001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.1; I.
PROSITE; PS00804; CALRETICULIN.2; I.
PROSITE; PS00805; CALRETICULIN.2; I.
                                                                                                                                                                                                               filarial parasite Dirofilaria immitis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                              MEDLINE-99094497; PubMed-9879888;
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68.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Onchocercidae; Litomosoides NCBI_TaxID=42156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 68.59
Matches 122; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RAL-1 PROTEIN (FRAGMENT)
Litomosoides sigmodontis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   18
387
                      Irofilaria immitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       375 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387 AA;
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Best Local Similarity
                                                                                                                         SEQUENCE FROM N.A.
                                                                              NCBI_TaxID=6287;
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018478

RESULT 018478

SEQUENCE

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Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
Triticeae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                     55.5%;
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Matches 101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                              415 AA;
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                                                                                                                                                                                                                                                                                                   Calcium-binding.
NON_TER 1
NON_TER 415
SEQUENCE 415 AJ
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               Triticeae, Horde
NCBI_TaxID-4513;
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Q43712;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 VFFQERF--EDGWESRWVKSEWKKDENWAGEWNHTSGKWHGDAE-DKGIQTSEDYRFYAI 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryotu; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; Lillopsida; Poales; Poaceae; Pooldeae;
Triticeae; Hordeum,
                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-MOREX; TISSUE-OVARY;
MEDLINK-94339699; PubMed-7914763;
Chen F., Huyes P.M., Mulroony D., Pan A.;
"Identification and characterization of cDNA clones encoding plant culreticulin in barley.";
Plant Cell 6:895-843(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRH2.
Hordeum vulgare (Barley).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            124 TKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                            141 IKKVHVILYFKNQYHENKKPIRCKVDGFTHLYTLILRPDLSYEVKVDGQSIESGSIE 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 412;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           47037 MW; 37F6C95D6AA78AB0 CRC64;
                                                                                                                                                    Last sequence update)
Last annotation update)
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Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 55.5%; Score 539; DB 10; Best Local Similarity 56.4%; Pred. No. 3.4e-43; Matches 101; Conservative 31; Mismatches 41;
                                                                                                           Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfum; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
                                                                                                           412
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                                                                                                                                     Created)
                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                 EMBL; 127348; AAA32948.1; -. Mendal; 8846; Horvu,1166;8546. Interpro; IPRO00886; ER_target. Interpro; IPRO01580; Calreticulin.
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                                                                                                                                   01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2001 (TrEMBLrel. 17, CALRETICULIN (FRAGMENT).
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01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2001 (TrEMBLrel. 17,
CALRETICULIN (FRAGMENT).
                                                                                                                                                                                                      Hordeum vulgare (Barley).
                                                                                                         PRELIMINARY;
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                                                                                                        040040
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61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23 VFFQEKF--EDGWESRWVKSEWKKDENWAGEWNHTSGKWHGDAE-DKGIQTSEDYRFYAI 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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SEQUENCE FROM N.A.
MEDITINE-9433966; PUBMed-7914763;
Chen F., Hayes P.M., Mulroony D., Pan A.;
Lidentification and characterization of cDNA clones encoding plant calreticulin in barley.
Plant Cell 6:835-843(1994).
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC cl
Panicoideae; Andropogoneae; Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [2]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
Dresselhaus T., Hagel C., Loerz H., Kranz E.;
Isolation of a full-length cDNA encoding calreticulin from a PCR library of in vitro zygotes of maize.";
Plant Mol. Biol. 31.23-34(1996).
EMBL; Z46772; CAA86728.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
9
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Napler R.M., Trueman S., Henderson J., Boyce J.M., Hawes C.R.,
Fricker M.D., Venis M.A.;
J. Exp. Bot. 46:1603-1613(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
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47359 MW; 2897914812FBE33E CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 539; DB 10;
Pred. No. 3.4e-43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31; Mismatches
                                                                                                                                                                                                                                                                                                                                    pfam; PF00262; calreticulin; 1.
PROMINS; PRO0626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
PROSITE; PS00014; ER_TARGET; UNNOWN.1.
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                                                                                                                                                                                                               EMBL; L27349; AAA329491;
Mendel, 847; Horvu,116;8847.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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3;
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                                                                                                                                                                                                                                                                                               4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                      Query Match 55.2%; Score 536; DB 10; Length 421; Best Local Similarity 56.4%; Pred. No. 6.7e-43; Matches 101; Conservative 31; Mismatches 41; Indels
                                                                                                                                                                    SIĞNAL 1 25 POTENTIAL.
CHAIN 26 421 CALRETICULIN.
SEQUENCE 421 AA; 48012 MW; 5AAE02B77ED3126D CRC64;
EMBL; X89813; CAA61939.1; -. Mendel; 11228; Zeama;1166;11228.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
Pfam; PF00262; Calreticulin.
PROSTE; PR00626; CALRETICULIN.
PROSTE; PS00803; CALRETICULIN.
PROSTE; PS00804; CALRETICULIN.2; I.
PROSTE; PS00804; CALRETICULIN.2; I.
PROSTE; PS00804; CALRETICULIN.2; I.
PROSTE; PS00805; CALRETICULIN.18PRAT; 2.
SIGNAL; Calcium-binding.
     DOR DOR STATES
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Search completed: January 9, 2002, 15:03:27 Job time: 269 sec

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GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
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 protein search, using sw model OM protein 9, 2002, 15:02:02; Search time 43.73 Seconds January Run on:

(without alignments)
106.258 Million cell updates/sec

US-09-828-000-4 Perfect score: Title:

61 340 1 TDMHGDSEYNIMFGPDICGP.....IRCKDDEFTHLYTLIVRPDN Sequence:

BLOSUM62 Scoring table:

219241 seqs, 76174552 residues Gapop 10.0 , Gapext 0.5 Searched: Total number of hits satisfying chosen parameters:

219241

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

pir1:* pir2:* pir3:* PIR_68:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

STIMMARTES

SUMMAKIES	Description	calreticulin precu	calreticulin, brai	14		calreticulin precu	calreticulin precu	calreticulin precu	calreticulin (clon	calreticulin homol	calreticulin precu		41K larval antigen	calreticulin autoa	calreticulin precu	calreticulin - bee	calreticulin precu	calreticulin - cas	calreticulin - bar	calreticulin - bar	calreticulin (Crt1	probable calreticu	hypothetical prote		calreticulin - com	calnexin - human	calnexin - soybean	calnexin precursor	calnexin precursor	
SOM	ID		843376	S06763	JH0819	A34154	836799	JH0795	\$29130	A56637	829129	571343	A32507	A48573	S25851	T14554	S58170	T10172	T05703	T05705	C96605	T07841	H86224	T16968	T03691	153260	T06415	9	3	i
	DB	- 7	7	П	7	Н	~	7	~	7	7	~	~	7	~	~	7	~	7	~	~	7	~	7	7	~	7	~	~	c
	Length	417	400	416	416	418	421	405	384	406	411	419	336	393	395	416	421	415	412	415	425	422	444	416	389	265	546	592	591	-
d	Query Match	100.0	98.5	98.5	98.5	98.5	98.5	89.7	87.1	86.2	84.7	84.4	76.8	71.2	68.7	6.09	60.3	59.4	58.8	58.8	58.5	57.4	57.1	56.2	55.9	36.3	36.0	35.7	35.4	7 00
	Score	340	335	335	335	335	335	305	296	293	288	287	261	242	233.5	207	205	202	200	200	199	195	194	191	190			121.5		
	Result No.	7	7	m	4	S	9	7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	c

calnexin precursor	calnexin-like prot	probable calnexin	calnexin homolog S	hypothetical prote	calnexin precursor	calnexin - maize (calmegin precursor	calnexin-t - mouse	calnexin homolog -	calcium-binding pr	calnexin homolog C	site-specific DNA-	hypothetical prote	hypothetical prote	hypothetical prote
A37273	JN0597	T10892	A46637	S40938	571342	T03251	A53418	A54086	T49873	S56142	S70552	JU0470	н85013	T01733	S50439
٦	7	~	7	~	7	7	7	7	7	7	7	-	7	7	7
593	530	540	582	619	622	428	611	611	532	560	297	540	457	968	260
35.4	34.0	34.0	34.0	34.0	34.0	31.9	31.9	31.9	30.4	30.3	26.6	22.8	19.9	19.9	19.4
120.5	115.5	115.5	115.5	115.5	115.5	108.5	108.5	108.5	103.5	103	90.5	77.5	67.5	67.5	99
30	31	32	33	34	32	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

A37047 A37047 A37047 A37047 A37047 A37047 A37047 A47047 A47047 A470404 A470404 A470405 A470407 A470407 A470407 A470407 A470407 A77047 A	J. BIOI. Chem. 207, 2357-2362, 1992 A;Title: The S'-flanking region of the human calreticulin gene shares homology with t A;Reference number: A42330; MUID:92129342 A:Accession: A42330
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A; Residues: 1-417 (MC2)
A; Note: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536)
B; McCauliffe, D.P.; Lux, F.A.; Lieu, T.S.; Sanz, I.; Hanke, J.; Newkirk, M.M.; Bachin J. Clin. Invest. 85, 1379-1391, 1990
A; Title: Molecular cloning, expression, and chromosome 19 localization of a human RO/A; Reference number: A37047; MUID:90237213

A; Accession: A3, 744, 7
A; Residues: 1-417 < ARC.
A; Residues: 1-417 < ARC.
A; Residues: 1-417 < ARC.
A; Cross-references: GB: M32294; NID: 9337486; PIDN: AAA36582.1; PID: 9337487
A; Note: the authors translated the codon GTA for residue 349 as Tyr
R; Rokeach, L.A.; Haseby, J.A.; Mellof, J.F.; Smeenk, R.J.; Unnasch, T.R.; Greene, B.
J. Immunol. 147, 3031-3039, 1991
A; Title: Characterization of the autoantigen calreticulin.
A; Reference number: A46452; MuID: 92013129
A; Accession: A46452
A; Molecule type: mRNA
A; Residues: 1.417 < ROK
A; Cross-references: GB: M84739; NID: 9179881; PIDN: AAA51916.1; PID: 9179882
A; Molecule type: mRNA
A; Residues: 82, 96-101, 1988
A; Title: Molecular characterization of human Ro/SS-A antigen. Amino terminal sequence
A; Residues: 82, 96-101, 1988
A; Fitle: Molecular characterization of human Ro/SS-A antigen. Amino terminal sequence
A; Residues: 18-14 < CLES
A; Molecule type: protein
A; Residues: 18-14 < CLES
A; Molecule type: protein
A; Residues: 18-14 < CLES
A; Molecule type: protein
A; Residues: 18-14 < CLES
A; Molecule type: protein
A; Residues: 18-14 < CLES
A; Molecule type: protein
A; Residues: 18-14 < CLES
A; Molecule type: protein
A; Residues: 18-14 < CLES
A; Molecule type: protein
A; Residues: 18-15, 1993
A; Title: The calcium-binding protein calreticulin is a major constituent of lytic gra
A; Molecule type: protein
A; Residues: 18-27 < CUPP>
A; Residues: 19-27 < CUPP>
A; Residues: 11-27 < CUPP>
A; Title: In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (C

Length 400;

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F;397-400/Region: endoplasmic reticulum retention signal F;120-146/Disulfide bonds: #status experimental F;162/Binding site: carbohydrate (Asn) (covalent) #status experimental
                                                                                                                                                                                                                                                                 Score 335; DB 2;
Pred. No. 1.7e-32;
1; Mismatches 0
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N;Alternate names: calcium-binding protein 3
C;Species: Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein
A; Residues: 74-80; 142-151; 186-193 <WHI>
                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 98.4%;
Matches 60; Conservative
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A; Residues: 1-416 <MAZ>
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JH0819
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A; Reference number: A40346; MUID:92002034
A; Accession: A40346
A; Molecule type: protein
A; Kesidues: 18-14, "R' <ROJ>
K; Krauso, K.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krauso, K.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krauso, R.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krauso, R.H.; Simmerman, H.K.B.; MuID:90380058
A; Reference number: $11475
A; Molecule type: protein
A; Refluces: 18-32 <RRA>
A; Molecule type: protein
A; Refluces: 18-32 <RRA>
A; Molecule type: protein
A; Refluces: 18-32 <RRA>
A; Molecule type: protein
A; Mercription: Characterization by genomic sequence analysis of a gene-rich 111 kb regic
A; Mestdues: 1-417
A; Molecule type: DNA
A; M
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843376
calreticulin, brain isoform 1 - bovine
C; Species: Hos primigenius taurus (cattle)
C; Species: Hos primigenius taurus (cattle)
C; Species: Hos primigenius taurus (cattle)
C; Date: 20-Oct-1994 *Sequence_revision 23-Mar-1995 *text_change 07-May-1999
C; Date: 20-Oct-1994 *Sequence_revision 23-Mar-1995 *text_change 07-May-1999
C; Date: 20-Oct-1994 *Sequence_revision 23-Mar-1995 *text_change 07-May-1999
R; Matsucks, K.; Seta, K.; Yamakawa, Y.; Okuyama, T.; Shinoda, T.; Isobe, T.
H; Matsucks, K.; Seta, K.; Yamakawa, Y.; Okuyama, T.; Shinoda, T.; Isobe, T.
A; Reference number: S43376; MUD:94183174
A; Reference number: S43376; MUD:94183174
A; Reference number: S36799; MUD:93385184
A; Reference number: S36801
A; Status: nucled: acid sequence not shown
A; Reference number: S36801
A; Reference numb
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A.Gene: GDB:CALR
A.Coss-references: GDB:125179; OMIN:109091
A.Map position: 19p13.3-19p13.2
A.Introns: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
A.Note: CRTC
G.Superfamily: calreticulin
G.Superfamily: calcium binding
F.i-17/Dowaln: signal sequence #status predicted <SIG>F:18-417/Product: calreticulin #status predicted <MAT>F:18-417/Region: endoplasmic reticulum retention signal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N 180
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                     1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
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                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:M92988; NID:g193084; PIDN:AAA37569.1; PID:g193085
A;Accession: PC1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Superfamily: calreticulin
C;Keywords: calcium binding
E;1-17,Domain: slignal sequence #status predicted <SIG>
E;1-17,Domain: slignal sequence #status experimental <MAT>
E;413-416/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98.5%; Score 335; DB 1;
100.0%; Pred. No. 1.8e-32;
iive 0; Mismatches 0;
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A) Experimental source: brain, clone 9.4 A) Accession: S36800
                                                                                                                                                                                                                                                                                                                                                    Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-418 <FLI>
                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 60; Conserv
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Best Local Similarity
Matches 60; Conserv
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A; Residues: 1-421 <LIU>
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C.Dete: 10-Sep-1993 Requence_revision 20 Awg-1994 Next_change 20-Jun-2000
C.Researon Manchay Add76 Sallofy Fillog $41005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005 $4005
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A; Molecule type: protein
A; Residues: 18-36 < VAN>
R; Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; Meld
Biochem. J. 271, 473-480, 1990
A; Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-storage
A; Reference number: S13045; MUID:91054414
A; Accession: S13045
A; Molecule type: protein
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Residues: 18-29 <TRE>
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A; Status: preliminary
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C;Accession: A34154; S13047
R;Pliegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.
J. Bioll Chem. 264, 2152-21528, 1989
A;Title: Molecular cloning of the high affinity calclum-binding protein (calreticulin A;Reference number: A34154; MUID:90094320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Cross-references: GB:J05138; NID:g164858; PIDN:AAA31188.1; PID:g164859
R; Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M Biochem. J. 271, 473-480, 1990
A; Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor A; Rcference number: S13045; MUID:91054414
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                calreticulin precursor, skeletal muscle - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 180
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C; Superfamily: calreticulin
C; Keywords: calcium binding; glycoprotein
C; Keywords: calcium binding; glycoprotein
F; 1-17. Domain: signal sequence #status predicted <SIG>
F; 18-416/Product: calreticulin #status experimental <MAT>
F; 18-412/Aregion: unclear location signal
F; 313-416/Region: endoplasmic reticulum retention signal
F; 314/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                               Length 416;
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F;1-17/Domain: signal sequence #status predicted <SIG>
F;415-418/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                              98.5%; Score 333; 5.2.;
100.0%; Pred. No. 1.8e-32;
+ive 0; Mismatches 0;
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100.0%; Pred. No. 1.8e-32;
ive 0; Mismatches 0;
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Ξ ò 5

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N;Alternate names: Ro/Ss-A autoantigen/caireticuiin homolog
C;Species: Drosophila melanogaster
C;Date: ll-Aug-1995 #sequence_revision 11-Aug-1995 #text_change 13-Aug-1999
C;Accession: A56637; A37158
R;Smith, M.J.
DNA Seq. 3, 247-250, 1992
A;Title: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticuli
A;Reference number: A56637; MUID:93208374
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A; Residues: 1-406 <SMI>
A; Cross-references: GB:X64461; NID:97685; PIDN:CAA45791.1; PID:97686
A; Norde: sequence extracted from NCBI backbone (NCBIN:128274, NCBIP:128275)
A; Note: sequence extracted from NCBI backbone (NCBIN:128274, NCBIP:128275)
B; McCauliffe, D.P.; Zappl, E.; Lieu, T.S.; Michalak, M.; Sontheimer, R.D.; Capra, J. Clin. Invest. 86, 332-335, 1990
J. Clin. Invest. 86, 332-335, 1990
A; Title: A human Ro/SS-A autoantigen 1s the homologue of calreticulin and is highly A; Accession: A37158
                                                                                                                           C;Species: Xenopus lacvis (African clawed frog)
C;Sate: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Accession: S29130; T01068
Biochem. J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous syst A;Reference number: S29129; MUID:93074997
A;Reference number: S29129; MUID:93074997
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A.Residues: 1-339, 'XTGR' <TRW>
A.Residues: 1-339, 'XTGR' <TRW>
A.Cross references: EMBL:X67598; NID:g64610; PIDN:CAA47867.1; PID:g64611
A.Experimental source: CNS
C.Superfamily: calreticulin
C.Keywords: glycoprotein
F:381-384/Region: endoplasmic reticulum retention signal
F;316/Binding site: carbohydrate (Asn) (covalent) #status predicted
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A;Introns: 65/1; 222/3
C;Superfamily: calreticulin
C;Reywords: calcium binding; endoplasmic reticulum
F;1-17/Domain: signal sequence #status predicted <SIG>F;403-406/Region: endoplasmic reticulum retention signal
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A; Residues: 91-105, 'A, 107, 109-124; 182-183, 'L', 185-220
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Pred. No. 7.7e-28;
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                                                                                                   calreticulin (clone 8) - African clawed frog
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86.9%;
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A;Accession: T01068
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Best Local Similarity
Matches 53; Conserv
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A; Residues: 1-384 <TRE>
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A;Molecule type: DNA
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NiAlternate names: protein 407
Cispecias: Aplysia californica (California sea hare)
Cispecias: 180795; B31409; F60977
R; Kennedy, T.E.; Kuhl, D.; Barzilai, A.; Sweatt, J.D.; Kandel, E.R.
A; Riference number: J40795; MUID:93098937
A; Reference number: J40795; MUID:93098937
A; Reference i J40795; MUID:93098937
A; Restance: California danglion and antral nervous system
A; Kennedy, T.E.; Gawhinowicz, M.A.; Barzilai, A.; Kandel, E.R.; Sweatt, J.D.
Proc. Natl. Acad. Sci. U.S.A. 85, 7008-7012, 1988
A;Tile: Sequencing of proteins from two-dimensional gels by using in situ digestion and the forence number: Acknown number: Ackn
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A: Accession: B31409
A: Accession: B31409
A: Molecule type: protein
A: Residuas: 'X', 17-28, 'X', 30-31 (KE2>
R: Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, K. R: Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, K. R: Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, K. R: Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, K. A.; Molecule of a datubase of amino acid sequences for proteins identified and A: Accession: F60977; MuID: 89276264
A: Accession: F60977
A: Molecule type: protein
A: Reviduas: 'X', 17-28, 'X', 30-31 (SWE>
C; Superfamily: calreticulin
A: Reviduas: calcium binding: endoplasmic reticulum
F; 1-15/Domain: signal sequence #status specimental (AMAT)
F; 1-605/Region: endoplasmic reticulum retention signal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TOMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                    #status predicted <MAT>
C; Superfamily: calreticulin
C; Keywords: calcium binding; glycoprotein
F;1-34/pomain: signal sequence #status predicted <SIG>
F;35-421/Product: calreticulin, brain isoform 2 #status predicted <
F;35-421/Product: calreticulin, brain isoform 2 #status predicted
F;418-421/Region: endoplasmic reticulum retention signal
F;141-167/Disulfide bonds: #status predicted
F;183/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                       Length 421;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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                                                                                                                                                                                                                                                                                                                                                              98.5%; Score 335; DB 2; Le 98.4%; Pred. No. 1.8e-32; Live 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89.7%; Score 305; DB 1; L
lurity 86.9%; Pred. No. 6.8e-29;
Conservative 5; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 60; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 53; Conserv
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C; Accession: A48573 Schacht, A.M.; Godin, C.; Pierce, R.J.; Capron, A. R; Khalife, J.; Trottein, F.; Schacht, A.M.; Godin, C.; Pierce, R.J.; Capron, A. Mol. Biochem. Parasitol. 57, 195-202, 1993 A; Title: Cloning of the gene encoding a Schistosoma mansoni antigen homologous to hum A; Reference number: A48573; MUID:93165070
                                                                                                                                                                                                                                                                                                                                                                                                     expression cDNA clones encoding antigens
                    ö
                                                                                                                                                                                                                                                                                                S25851
calreticulin precursor - Caenorhabditis elegans
C:Species: Caenorhabditis elegans
C:Species: Caenorhabditis elegans
C:Date: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Schistosoma mansoni
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence inconsistent with the nucleotide translation sequence extracted from NCBI backbone (NCBIN:125085, NCBIP:125086)
                                                          1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   calreticulin autoantigen homolog precursor - fluke (Schistosoma mansoni)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 336;
                                                                                                                                                                                                                                                                                 41K larval antigen - nematode (Onchocerca volvulus) (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10; Indels
                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Note: sequence extracted from NCB1 DackDune (NCB10.2...C.) Superfamily: calreticulin
F;1-16/Domain: signal sequence #status predicted <SIG>F;390-393/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 261; DB 2;
Pred. No. 1e-23;
; Mismatches 8;
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Pred. No. 2.3e-21;
3; Mismatches 10
Pred. No. 1e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-393 <KHA>
A;Cross-references: GB:M93097; NID:q160928
A;Note: sequence inconsistent with the nucleotide
                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               76.8%;
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Best Local Similarity 77.6%;
Matches 45; Conservative
85.2%;
Best Local Similarity 85.2
Matches 52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Superfamily: calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-336 <UNN>
C; Superfamily: calreticu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 46; Conserv
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                                                                                                                                                                            N 181
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C;Species: Xenopus laevis (African clawed frog)
C;Species: Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Accession: S29129
R;Treves, S.; Zorzato, F.; Pozzan, T.
Biochem. J. 280, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous system. A;Reference number: S29129; MUID:93074997
A;Recession: S29129
A;Holecule type: mRNA
A;Residues: 1-411 <TRE>
A;Corsos-references: EMBL.X67597; NID:964608; PIDN:CAA47866.1; PID:964609
C;Superfamily: calreticulin
C;Keywords: glycoprotein
F;13-LIZOpomain: signal sequence (fragment) #status predicted <SIG>F;13-411/Product: calreticulin #status predicted <AMT>F;13-411/Region: endoplasmic reticulum retention signal
F;339/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                    120 TDMHGESPYEIMFGPDICGPGTKKVHVIFSYKGKNHLISKDIRCKDDVYTHFYTLIVRPD 179
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                                                                                             1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
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                  Length 406;
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              Score 293; DB 2; Length 40
Pred. No. 1.9e-27;
4; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 288; DB 2; Length 41
Pred. No. 7.5e-27;
3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
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85.2%;
                86.2%;
85.2%;
                                                        Conservative
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                                 1 Similarity
52; Conserv
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Best Local Simil
Matches 52; (
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C; Accession: S25851; T33996 R; Smith, M.J.

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A; Stutus: preliminary
A; Molecule type: DNA
A; Relatus: preliminary
A; Molecule type: DNA
A; Relatus: preliminary
A; Courtney, L.; Laplant, Y.
K; Rauer, C.; Courtney, L.; Laplant, Y.
K; Reference number: 221453
A; Reference number: 221453
A; Reference number: 221453
A; Relatus: preliminary; translated from GB/EMBL/DDBJ
A; Relatus: preliminary; translated from GB/EMBL/DDBJ
A; Relatus: DNA
A; Relatus: DNA
A; Relatus: DNA
A; Relatus: DNA
A; Relatus: SERP: 338 Alloa.
A; Reperimental source: strain Bristol N2; clone Y38A10A
A; Grone: CBSP: Y38A10A.5
A; Mup position: 5
A; Mup position: 5
A; Mup position: 5
A; Mup calreticulin
F; 1-15/Domain: signal sequence *status predicted <SIG>F; 392-395/Region: endoplasmic reticulum retention signal
R;Smith, M.J.

DNA Seq. 2, 235-240, 1992

A;Tilia: A C. elegans gene encodes a protein homologous to mammalian calreticulin.

A;Reference number: 825851; MUID:92329978

A;Accession: $25851
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culrettculin - beet
C;Species: Beta vulgaris (beet)
C;Species: Beta vulgaris (beet)
C;Date: 20-sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Jun-2000
C;Gccession: T14554
R;Viercek, R.
R;Viercence number: 218137
A;Reference number: 218137
A;Residues: T14554
A;Residues: 1-416 <VIE>
A;Residues: 1-416 <VIE>
A;Residues: 1-416 <VIE>
A;Residues: 1-416 <VIE>
A;Repidues: 1-416 <VIE>
A;Repidues: 1-416 <VIE>
A;Repidues: 21-416 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, 1
Sequence 2, 1
Sequence 6, 1
Sequence 8, 1
Sequence 8, 1
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/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
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US-08-262-2
US-08-266-8
US-09-458-791-8
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US-08-945-511-48
US-08-966-8
US-08-966-53
US-08-966-53
US-08-991-408-4
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US-08-2240-473-5
US-09-240-473-5
US-08-291-193A-56
US-08-240-473-5
US-08-21-193A-56
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               GenCore version
Copyright (c) 1993 - 2000
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length: 2000000000
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US-08-184-009-120
US-08-458-356-120
US-08-460-736-120
US-08-460-736-120
US-08-465-496A-10
US-08-915-136-110
US-08-946-914-11
US-08-915-136-110
US-08-245-511-47
US-08-600-993A-47
US-07-97-451-2
US-07-97-451-2
US-07-946-507-2
US-08-601-891-2
US-08-601-891-2
US-08-601-891-2
US-08-601-891-2
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Sean J. Sean J. Jar., Ron J. Calreficulin AND CALNEXIN GENES AND PROMOTER RECIONS 16 SS: 16 SS: 16 BBETY Ave. Suite 6300 NR-1005/MS-100 RC-DOS/MS-100	SC.	78
	Gaps	
DMOT	9:	ARFYAL : YRFYAI
PRO	415;	SQD/ : SED/
AND	ngth 4 Indels	DKGLQTSQDARFYA : : : DKGIQTSEDYRFYA
S ଅ	Length Indel	VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL : : : -
1.25	3;	GDEE
DX #1	B 4 51;	SSGKFYGD : : TSGKWNGD
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Sean J. Sean J. Sean J. Tr., Ron Tr., Ron Ti. Hebry Ne. Sui Ne	96 96 	SSKH :- (SDW
T 1 -675-816-2 uence 2, Application US/08675816 ent No. 6171864 RERAL INPORMATION: APPLICANT: Winfrey, Jr., Ron J. APPLICANT: COUGhlan, Sean J. APPLICANT: COUGHLAN, Jr., Ron J. APPLICANT: Winfrey, Jr., Ron J. ADDRESSEE: Seed and Berry STREET: 701 Fifth Ave. Suite 6300 CITY: Seattle CONFESS: COMPUTER: Washington COUNTRY: U.S.A. ZIP: 98104-7092 COMPUTER: ERADABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: BAPPLICATION DATA: APPLICATION NUMBER: US/08/675,816 FILING DATE: 05-JUL-1996 CLASSIFICATION NUMBER: 39,317 RELEPRANCE/DOCKET NUMBER: 39,317 TELEPHONE: (206-622-4900 TELEPAN: A15 amino acids TYPE: amino acids TYPE: amino acids TYPE: Innear MOLECULE TYPE: protein	54. ilarity 55. Conservative	DGWTSRWIES : : DGWENRWVKS
ation US, 3N: 3hlan, Sr Jhlan, Sr Jh	гу erva	SWTS
2 Application US 1/1864 Coughlan, S Coughlan, S Winfrey, Jr Winfrey, Jr Winfrey, Jr Winfrey, Jr Seguences: 1 DENCE ADDRESS: 1 DENCE ADDRESS: 1 DENCE ADDRESS: 1 DENCE ADDRESS: 1 Washington Washington U.S.A. Washington Washington Com READABLE FORM: FIETH AV Seattle Washington U.S.A. Washington Com Com READABLE FORM: FIETH PR READABLE FORM: TYPE: FIDPPY REI IBM PC Com READABLE FORM: TYPE: FIDPPY REI DATE: 05-UUL- TYPE: FIDPPY NO. 6171864ten NO. 6171864ten NO. 6171864ten NO. 6171864ten NO. 6171864ten NO. 6171864ten ATION NUMBER: (206-622-632-643-643-643-643-643-643-643-643-643-643	ari	- ED(
2 Applica 171864 ORMATIO COUGH IN WANTIE TOUE SEATCHE MASHING WASHING	imil , C	EQFI ERF-
T 1 -675-816-2 uence 2, Application US ent No. 6171864 NERAL INFORMATION: APPLICANT: Coughlan, S APPLICANT: Winfrey, Jr TITLE OF INVENTION: NUMBER OF SEQUENCES: 1 CORRESPONDENCE ADDRESS: 3 CORRESPONDENCE ADDRESS: 1 CORRESPONDENCE ADDRESS: 1 CITY: Seattle STREET: 701 Fifth Av CITY: Seattle STREET: 702 Fifth Av CITY: Seattle STREET: 703-702 COUNTRY: US.A. LIP: 98104-7092 COMPUTER READABLE FORM: MEDIUM TYPE: FlOPPY COMPUTER READABLE FORM: MEDIUM TYPE: FLOPPY COMPUTER: Date: 100 SOFTWARE: Patentin R CURRENT APPLICATION NUMBER: FILING DATE: 05-UUL FILING DATE: 05-UUL STEEFONDENCE CHARACTERISTIC LENGTH: 015 MOMBER: REFERENCE/POCKET NUMBER: REFERENCE/POCKET NUMBER: REFERENCE/POCKET NUMBER: TELEPHONE: (206-622-TELEPAX: (206)-682-682-672-MAME: NO-6171864-EM TELEPHONE: (206)-682-672-MAME: NO-6171864-EM TYPE: amino acid TYPE: TELEPAX: (206)-682-675-816-2	ch 11 Sin 99;	VYFKEQF : : : VFFEERF
T 1 -675-816- uence 2, uence 2, uence 2, APPLICANT APPLICANT APPLICANT TITLE 0F CORRESPON STREET: STATE: STATE: COUNTRY COMPUTER MEDIUM SOFTWAT SOFTWAT SOFTWAT SOFTWAT SOFTWAT TELEPH TELECOMM TELEPH	Mat Loca es	22 2
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APPLICANT: Bergeron, John J.M.
APPLICANT: Bergeron, John J.M.
APPLICANT: Thomus, David Y.
APPLICANT: Wada, Ikuo
TITLE OF INVENTION: METHODS OF DETECTION AND TREATMENT OF
TITLE OF INVENTION: PROTEIN TRAFFICKING DISORDERS AND INCREASING SECRETORY
TITLE OF INVENTION: PROTEIN PRODUCTION
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
108 DSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCK------DDEFTHLYTL 157
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                                                        121 GPGTKKVHVIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                 Querry Match 29.9%; Score 290; DB 1; Length 593; Best Local Similarity 38.1%; Pred. No. 2.1e-24; Matches 77; Conservative 26; Mismatches 65; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,362
FILING DATE: 25-40G-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Devolr, Manya S.
REGISTRATION NUMBER: 37,120
REFERENCE/POCKET NUMBER: 690066.401C1
THIRGOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: SEED and BERRY
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Putent No. 5691306
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TELEFAX: (206) 682-6031
TELEX: 3723836
INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy
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GENERAL INFORMATION:
APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
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Patent No. 6130068
GENERAL INFORMATION:
APPLICANT: Melanie K. Spriggs, Michael R. Comeau,
APPLICANT: Robert F. Dubose, Richard S. Johnson
TITLE OF INVENTION: VIRAL ENCODED SEMAPHORIN PROTEIN
TITLE OF INVENTION: RECEPTOR DNA AND POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                 SUFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
ATTONIEY/AGENT THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 227.5; DB 4
Pred. No. 2.2e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 750027.401
                                                                                                                                                                                           ADDRESSEE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: No. 6171864tenburg, Carol
REGISTRATION NUMBER: 39,317
US-08-675-816-6; Sequence 6, Application US/08675816; Patent No. 6171864
                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
TELEPHONE: (206-622-4900
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36.0%;
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Janis C. Henry
STREET: 51 University St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (206)-682-6031
INFORMATION FOR SEQ ID NO: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 542 amino acids
TYPE: amino acid
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STREET: 701 -
CITY: Seattle
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                                                                                                                                                                                                                                                                              COUNTRY: U.S.A.
ZIP: 98104-7092
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FILING DATE: 10-Dec-1999
CLASSIFICATION: <Unknown>
PRIOR APPLICATION NUMBER: 08/958,598
FILING DATE: 28-0CT-1997
ATTORNEY/AGENT INFORMATION:
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MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 8:
US-09-458-791-8
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: MS-DOS/Windows 95
SOFTWARE: Word for Windows 95, 7.0a
                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 2631
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206/470-4189
TELEPAX: (206)233-0644
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 661 amino acids
                                                                                                                                                                                                                                                                                        NAME: Henry, Janis C
REGISTRATION NUMBER: 34,347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-459-066-8
; Sequence 8, Application US/09459066
; Patent No. 6187909
GENERAL INFORMATION:
APPLICANT: Spriggs, Melanie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Janis C. Henry
STREET: 51 University St.
CITY: Seattle
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ZIP: 98101
COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62 ASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICG 121
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                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: --to be assigned-- (USSN 08/958,598
APPLICATION NUMBER: conversion to Provisional application)
FILING DATE: October 26, 1998
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Henry, Janis C
REGISTRATION NUMBER: 34,347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9.2%; Score 89; DB 4; Length 660; 20.6%; Pred. No. 0.14; tive 25; Mismatches 91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VIRAL ENCODED SEMAPHORIN PROTEIN RECEPTOR DNA AND POLYFEPTIDES
                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/958,598 (converted to a APPLICATION NUMBER: Provisional, see below)
FILING DATE: October 28, 1997
                     ZIP: 98101

MEDIUM TREE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/181,706
FILING DATE: October 28, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Annis C. Henry
STREET: 51 University St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 2631-A TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 8, Application US/09458791
Patent No. 6174689
GENERAL INFORMATION:
APPLICANT: Spriggs, Melanie
TITLE OF INVENTION: VIRAL ENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (206)233-0644
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 660 maino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             162 DNTYEVKIDNSOVESGSLE 180
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TELEFAX: (206)233-0644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 20.6%
Matches 41; Conservative
                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear

MOLECULE TYPE: protein

US-09-181-706-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122 PGTKKV-HVIFN--
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                                                                                                                                                                                                        CLASSIFICATION:
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448 YIAQMCLNDEGGPSS-LSSHRWSTFLKVELECDIDGRSYRQIIHSKAIKTDNDTILIYVFF 506
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match 9.2%; Score 89; DB 4; Length 660; Best Local Similarity 20.6%; Pred. No. 0.14; Matches 41; Conservative 25; Mismatches 91; Indels
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TITLE OF INVENTION: VIRAL ENCODED SEMAPHORIN PROTEIN
TITLE OF INVENTION: RECEPTOR DNA AND POLYPEPTIDES
TUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: MS-DOS/Windows 95
SOFTWARE: WOR'D for Windows 95, 7.0a
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/458,791
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ORGANISM: Streptococcus pneumoniae IMMEDIATE SOURCE:
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411 Hackensack Avenue
      FILING DATE: 01-SEP-1994
ATTORNEY/AGENT INFORMATION:
AMME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
                                                                                                                              TELEPHONE: 201 487-5800
TELERAX: 201 343-1684
TELEX: 13521
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 642 amino acids
TYPE: amino acids
                                                                        26,742
                                                                                     REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201 487-5800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: sequen
OTHER INFORMATION: from G
PUBLICATION INFORMATION:
AUTHORS: Alloing, et al.
JOURNAL: MOI. MICROBIOI.
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                                                                                                                                                                                                                                                                        TOPOLOGY: unknown MOLECULE TYPE: peptide HYPOTHETICAL: NO ANTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION:
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CITY: Hackensack
STATE: New Jersey
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DATE: 1990
US-08-245-511-48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63 ASFEPFSNKGOTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICG 121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        549 PAGKVVPHTTFDIIEQYNELDDIIKPLSQPIFEGPSGVKWFDIKEKENEHREYRIYFIKE 608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 YFKEQFLDGDGWTSRWIESKHKSDFGKFVLS---SGKFYGDEEKDKGLQTSQDARFYALS 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match 9.2%; Score 89; DB 4; Length 660; Best Local Similarity 20.6%; Pred. No. 0.14; Matches 41; Conservative 25; Mismatches 91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Mesure, H Robert
APPLICANT: Pearce, Barbara J
APPLICANT: Pearce, Barbara J
APPLICANT: Tuomanen, Elaine
TITLE OF INVENTION: BACTERIAL EXPORTED PROTEINS AND
TITLE OF INVENTION: ACELLULAR VACCINES BASED THEREON
NUMBER OF SEQUENCES: 58
CONRESPONDENCE ADDRESS:
ADDRESSEE: Klauber & Jackson
STREET: 411 Hackensack Avenue
CITY: Hackensack
STREET: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOWFWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                     APPLICATION NUMBER: US/09/459,066
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APPLICATION NUMBER: US 08/116,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/245,511
FILING DATE: 18-MAY-1994
CLASSIFICATION: 424
                                     FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/958,598
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 48, Application US/08245511
Putent No. 5928900
                                                                                                                                                               NAME: Henry, Janis C
REGISTRATION NUMBER: 34,347
REFERENCE/DOCKET NUMBER: 2631
TELLECOMMUNICATION INFORMATION:
TELEPHONE: (206)470-4189
TELEPHONE: (206)470-4189
INFORMATION FOR SEC ID NO: 8:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              162 DNTYEVKIDNSQVESGSLE 180
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CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                 / MOLECULE TYPE: protein
US-09-459-066-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                              amino acid
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NOTE: the reference contains a sequence error; the correct sequence shown below is obtain from GENBANK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220 EQYWDKENVHLDTINLAYYDGSDQESLERNFTSGAYSYARLYPTSSNYSKVAEEYKDNIY 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65 EPFSNKGOTLVVQFTVKH-----EQNIDCGG-GYVKLFPNSLDQT---DMHGDSEY 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16 WTSR----W----IESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSASF 64
                                                                                                                                                                                                                                                                                                                                                                                                                                    55;
                                                                                                                                                                                                                                                                                                                                                                                                                             81; Indels
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Sequence 48, Application US/08600993A
Sequence 48, Application US/08600993A
Sequence 48, Application US/08600993A
GENERAL INFORMATION:
APPLICANT: Masure, H Robert
APPLICANT: Paerce, Barbara J
APPLICANT: Tuomanen, Elaine
TITLE OF INVENTION: ACELLULAR VACCINES BASED THEREON
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   112 NIMFGPDICGPGTKKVHVIFNYKG------KNVLINKDIR---
                                                                                                                                                                                                                                                                                                                                                              Query Match 8.0%; Score 77.5; DB 2; Best Local Similarity 21.2%; Pred. No. 2.6; Matches 42; Conservative 20; Mismatches 81;
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APPLICANT: Reed, Steven G.
APPLICANT: Dillon, Davin C.
APPLICANT: Twardzik, Daniel R.
APPLICANT: Mitchad Jennifer L.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR IMMUNOTHERAPY
TITLE OF INVENTION: AND IMMUNODIAGNOSIS OF PROSTATE CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 77; DB 3; Length 15;
Pred. No. 0.013;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: ARLETH, ANTHONY J.
APPLICANT: WILLETTE, ROBERT N.
APPLICANT: ELSHOURBAGY, NABIL A.
APPLICANT: LI, XIAOTONG
TITLE OF INVENTION: HUMAN CARDIAC/BRAIN TOLLOID-LIKE
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: 9.00 PMLICATION NUMBER: US/08/946,026 FILING DATE: 07-0CT-1997
                                                                                                                                                                                                                        ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SYSTEM: DOS
FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 07-OCT-1997
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: MAKI, David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 210121.424C1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                           ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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100.08; Pie
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STREET: P.O. BOX 980
CITY: VALLEY FORGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 53:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMPATIBLE
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGIH: 15 amino acids
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Best Local Similarity 100.
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SS: single
linear
                                                                                                                                                                       NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 PAVYFKEQFLDGDG 15
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                                                                                                                                                                                                                                                                                                  Washington
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STRANDEDNESS: sir
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                             Seattle
                                                                                                                                                                                                                                                                                                                              USA
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                                                                                                                                                                                                                                                                                                  STATE: WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-991-408-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: the reference contains a sequence error; the OTHER INFORMATION: correct sequence shown below is obtained from GENBANK PUBLICATION INFORMATION:
AUTHORS: Alloing, et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               164 WNSKLTYSIFWPLNEEFETSKGSDFAKPTDPTSLLYNGPFLLKGLTAKSSVEF----VKN 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  220 EQYWDKENVHLDTINLAYYDGSDQESLERNFTSGAYSYARLYPTSSNYSKVAEEYKDNIY 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112 NIMFGPDICGPGTKKVHVIFNYKG------KNVLINKDIR-----------------145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280 YTQSGSGIAGLGVNIDRQSYNYTSKTTDSEKVATKKALLNKDFRQALNFALDRSAYSAQI 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 65 EPFSNKGQTLVVQFTVKH------EQNIDCGG-GYVKLFPNSLDQT---DMHGDSEY 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 8.0%; Score 77.5; DB 2; Length 642; Best Local Similarity 21.2%; Pred. No. 2.6; Matches 42; Conservative 20; Mismatches 81; Indels 5
               MEDIUM TYPE: Floppy disk
COMPUTER: BM PC compatible
OPERATING SYZHE: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/600,993A
FILING DATE: 1-MAR-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/245,511
FILING DATE: 18-MAY-1994
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/245,511
FILING DATE: 18-MAY-1994
FILING DATE: US 08/245,511
APPLICATION NUMBER: US 08/245,511
FILING DATE: US 08/245,511
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 600-1-069 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201 487-5800
TELEFAX: 201 343-1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Streptococcus pneumoniae
IMMEDIATE SOURCE:
CLONE: amiA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 53, Application US/08946026 Patent No. 6034218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 133521
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 642 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146 -CKDDEFTHLYTLIVRPD 162
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COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; PAGES: 633-644
; DATE: 1990
US-08-600-993A-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGINAL SOURCE:
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US-08-946-026-53
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Gaps

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39; Indels 18; Gaps

DB 2; Length 1013;

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68 SNKGQTLVVQF-TVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG-TK 125
                                                                                                                                                                                                                               126 KVHVIFNYKGKNVLI -- NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                                                                                                                                     ; Score 75; DB;
; Pred. No. 9.7;
15; Mismatches
                                                                                                                                   Query Match 7.7%;
Best Local Similarity 31.4%;
Matches 33; Conservative 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 1013 amino acids
   LENGTH: 1013 amino acids TYPE: amino acid
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                                ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-866-650-5
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; MOLECULE TYPE: protein US-09-021-287-5
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Matches 33; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 7.7%; Score 75; DB 3; Length 591; Best Local Similarity 31.4%; Pred. No. 4.5; Matches 33; Conservative 15; Mismatches 39; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126 KVHVIFNYKGKNVLI--NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
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Putent No. 593931
GENERAL INFORMATION:
APPLICANT: Greenspan, Daniel S
APPLICANT: Takahara, Kazuhiko
APPLICANT: Hoffman, Guy G
TITLE OF INVENTION: Mammalian Tolloid-Like Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER KEADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/991,408
FILING DATE:
CLASSIFFICATION:
PHUR APPLICATION DATA:
APPLICATION DATA:
APPLICATION UNDRER:
ILING DATE: 02-JAN-1997
ATTOKNEY/AGENT INFORMATION:
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                                                                                                                                               NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: ATG-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700
TELEFRAX: 610-407-0701
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REGISTRATION NUMBER: 37094
REFERENCE/DOCKET NUMBER: 96
TELECOMMUNICATION INFORMATION
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                        TELEFAX: 610-407-0701
TELEX: 846169
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 591 amino acids
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                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                         ) MOLECULE TYPE: protein US-08-991-408-4
                                                                                                                                                                                                                                                                                                                                                                            linear
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US-08-866-650-5
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68 SNKGQTLVVQF-TVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG-TK 125
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973 EIYSI----GDSVLIHFHTDDTINKKGFHIRYKSIRYPDTTHTKK 1013
                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Greenspan, Daniel S
APPLICANT: Takahara, Kazuhiko
APPLICANT: Hoffman, Guy G
TITLE OF INVENTION: Mammalian Tolloid-Like Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: Quarles & Brady
STREET: 1 South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/021,287
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CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/866,650
                                                                                                              US-09-021-287-5; Sequence 5, Application US/09021287; Patent No. 5981717
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: BEFSON, BENEGIT
REGISTRATION NUMBER: 37094
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                                                                                                                                                                                          APPLICANT: ARLETH, ANTHONY J.
APPLICANT: WILLETTE, ROBERT N.
APPLICANT: WILLETTE, ROBERT N.
APPLICANT: ELSHOURBACY, NABIL A.
APPLICANT: LI. XIAOTONG
TITLE OF INVENTION: HUMAN CARDIAC/BRAIN TOLLOID-LIKE
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS: ADDRESSE: RAINER & PRESTIA
STRET: P.O. BOX 980
CITY: VALLEY FORGE
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39; Indels
                         973 EIYSI----GDSVLIHFHTDDTINKKGFHIRYKSIRYPDTTHTKK 1013
126 KVHVIFNYKGKNVLI--NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
OPERATE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/991,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.7%; Score 75; DB
31.4%; Pred. No. 9.7;
Live 15; Mismatches
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/034,471
FILING DATE: 02-JAN-1997
ATORNEY/ACENT INFORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: ATG-500:
TELEFORMITGATION INFORMATION:
TELEFORMITGATION INFORMATION:
TELEFORMITGATION INFORMATION:
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Sequence 5, Application US/09240473
Patent No. 6297011
GENERAL INFORMATION:
APPLICANT: Greenspan, Daniel S
                                                                                                                                    Sequence 2, Application US/08991408
Patent No. 6008017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: 846169
INFORMATION FOR SEQ 1D NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1013 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 7.7%
Best Local Similarity 31.4%
Matches 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
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                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 19482
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                                                                                                                     US-08-991-408-2
                                                                                              RESULT
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Sequence 56. Application US/08231193A
Patent No. 584895
GENERAL INFORMATION:
APPLICANT: Daggett, Lorrie P.
APPLICANT: Liaw, Chen W.
APPLICANT: Liaw, Chen W.
APPLICANT: Lu, Chin-Chun
TITLE OF INVENTION: SUBUNITS, NUCLEIC ACTDS ENCODING SAME AND USES THEREFOR NUMBER OF SEQUENCES: 63
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68 SNKGQTLVVQF-TVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG-TK 125
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 75; DB 4; Length 1013; Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             973 EIYSI----GDSVLIHFHTDDTINKKGFHIRYKSIRYPDTHTKK 1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            126 KVHVIFNYKGKNVLI -- NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                     APPLICANT: Hoffman, Guy G
TITLE OF INVENTION: Mammalian Tolloid-Like Protein
                                                                                                                                                                                                                                       COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARP: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/240,473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Brown, Martin, Haller & McClain
STREET: 1660 Union Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   960296.93839
                                                                                                    ADDRESSEE: Quarles & Brady
STREET: 1 South Pinckney Street
CITY: Madison
APPLICANT: Takahara, Kazuhiko
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Berson, Bennett J
REGISTRATION NUMBER: 37094
REFERENCE/DOCKET NUMBER: 96
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 7.7%;
Best Local Similarity 31.4%;
Matches 33; Conservative 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 1013 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                            NUMBER OF SEQUENCES: 1:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Quarles &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
MOLECULE TYPE: protein
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 1000
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                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                 ΩS
                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                          COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-231-193A-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-240-473-5
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CURRENT APPLICATION DATA:

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PELLING DATE: 20-APR-1994

FILING DATE: 20-APR-1994

CLASSIFICATION DATE: 36

PRIOR APPLICATION DATE: 36

PRIOR APPLICATION DATE: 30-APR-1993

FILING DATE: 30-APR-1993

CLASSIFICATION NUMBER: US 08/052,459

FILING DATE: 30-APR-1993

CLASSIFICATION NUMBER: 6362-9383

REFERENCE/DOCKET NUMBER: 6362-9383

FRIERPHONE: 619-238-0062

INFORMATION INFORMATION:

FRIERPONE: 619-238-0062

INFORMATION FOR SEQ. ID NO: 56:

SEQUENCE CHARACTERISTICS:

LENGTH: 1484 amino acids

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-231-1938-56
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Querry Match
7.5%; Score 72.5; DB 2; Length 1484;
Best Local Similarity 27.7%; Pred. No. 32;
Matches 23; Conservative 13; Mismatches 28; Indels 19; Gaps

: DD 1382 VTQNPFIPTFGDDQCLLHGSKSY 1404 Search completed: January 9, 2002, 14:59:42 Job time: 69 sec

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GenCore version 4.5

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OM protein - protein search, using sw model

Run on: January 9, 2002, 14:58:53; Search time 43.73 Seconds

(without alignments)

313.547 Million cell updates/sec

Title: US-09-828-000-3

Perfect score: 971

Sequence: LEPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSOVESGSLE 180

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 219241 seqs, 76174552 residues
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
Database: PIR_68:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No. Score Match Length DB ID Description

1 971 100.0 417 1 A37047 Calreticulin precu 2 930 95.8 416 2 JH0819 Calreticulin precu 3 931 95.8 416 1 S06763 Calreticulin precu 6 835 86.0 416 2 S29130 Calreticulin precu 7 804 82.8 416 1 S06763 Calreticulin precu 8 797 82.1 344 2 S29130 Calreticulin precu 6 835 86.0 412 2 JH0795 Calreticulin precu 7 86.9 72.0 406 2 A56637 Calreticulin precu 10 699 72.0 406 2 A56637 Calreticulin precu 11 542.5 55.9 336 2 A55637 Calreticulin precu 12 542.5 55.9 336 2 A55637 Calreticulin precu 13 539 55.5 412 2 T05703 Calreticulin precu 14 539 55.5 412 2 T05703 Calreticulin precu 15 536 55.2 421 2 S58170 Calreticulin precu 16 531 54.7 416 2 T105703 Calreticulin precu 17 527 54.3 415 2 T10372 Calreticulin precu 18 530 55.2 421 2 S58170 Calreticulin precu 18 530 55.2 421 2 S58170 Calreticulin precu 18 530 55.2 421 2 S58170 Calreticulin calreticulin calreticulin calreticulin calreticulin (Crt 18 52.5 53.8 415 2 T10372 Calreticulin Calreticulin (Crt 18 52.5 53.8 415 2 T10372 Calreticulin calreticulin calreticulin calreticulin calreticulin precu 22 55.2 53.8 416 2 T05503 Calreticulin calreticulin calreticulin precu 23 496 51.1 393 1 A48573 Calreticulin precu 24 347 35.7 422 2 T07841 Calreticulin precu 25 290 29.9 591 2 E54354 Calreticulin calreticulin 27 520 290 29.9 591 2 E54354 Calreticulin precu 28 290 29.9 591 2 E54354 Calreticulin calreticulin calreticulin precu 28 290 29.9 592 1 A46673 Calreticulin calreticulin calreticulin calreticulin precursor 26 290 29.9 593 1 A46673 Calreticulin calreticulin calreticulin calreticulin calreticulin calreticulin precursor 29 290 29.7 592 1 A46673 Calreticulin precursor 29 290 29.7 592 1 A46673 Calreticulin precursor 29 290 29.7 592 2 E5500 29.0 593 1 A46673 Calreticulin calre

calmegin precursor	calnexin precursor	calcium-binding pr	calnexin-t - mouse	calnexin homolog S	hypothetical prote	calnexin-like prot	calnexin - soybean	probable calnexin	calnexin homolog -	calreticulin, uter	calreticulin, slow	calreticulin, brai	calnexin homolog Y	calnexin homolog C	calnexin - maize (
A53418	S71342	S56142	A54086	A46637	S40938	JN0597	T06415	T10892	T49873	E33208	C33208	D33208	S29347	S70552	T03251
7	7	7	~	7	7	7	7	7	7	~	7	7	7	~	7
611	622	260	611	582	619	530	546	540	532	29	29	29	502	297	428
27.8	27.0	26.1	26.0	25.5	25.1	24.6	23.9	22.2	20.6	16.2	14.9	14.8	13.7	13.3	12.8
270	262	253.5	252	248	244	238.5	232	215.5	200.5	157	145	144	133.5	129	124.5
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

219241

Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 2000000000

Minimum DB 8 Maximum DB 8

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R.Murthy, K.K.; Banville, D.; Srikant, C.B.; Carrier, F.; Holmes, C.; Bell, A.; Patel Nucleic Acids Res. 18, 4933, 1990
A.Title: Structural homology between the rat calreticulin gene product and the Onchoc A; Reference number: S11205; MUD:90370496
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A;Reafudes: 'R',270-758,'AAG' <LON>
A;Reafudes: 'R',270-758,'AAG' <LON>
A;Reafudes: 'R',270-758,'AAG' <LON>
Cross-references: EMBL:X13702; NIDO:956055; PIDN:CAA31987.1; PID:9930260
A;Note: the authors designated the protein as D-beta hydroxybutyrate dehydrogenase
R;Yokoi, T.; Nagayama, S.; Kajiwara, R.; Kawaguchi, Y.; Horluchi, R.; Kamataki, T.
Bjochim. Biophys: Acta 1158, 339-344, 1993
A;Title: Identification of protein disulfide isomerase and calreticulin as autoimmune
A;Reference number: S39371; MUID:94072621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Experimental Source: testis, strain Sprague-Dawley
R; Scennichsen, B.; Fuellekrug, J.; van Nguyen, P.; Diekmann, W.; Robinson, D.G.; Mies
submitted to the EMBL Data Library, May 1994
A; Description: Retention and retrieval: both mechanisms cooperate to maintain calreti
A; Reference number: $45036
A; Accession: $45036
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A; Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Reference number: $13045; MUID:91054414
A; Recession: $13045
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A;Residues: 18-23, "7,"25-32 < YOK>
N;Rvan, P.N.; Peter, F.; Soeling, H.D.
J. Biol. Chem. 264, 17494-17501, 1989
A;Title: Pour intractisternal calcium-binding glycoproteins from rat liver microsomes
litive calcium sequestering rat liver vesicles.
A;Reference number: A34473; MUID:900008920
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                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Realdues: 1-416 <MUR>
A; Realdues: 1-416 <MUR>
A; Cross-references: EMBL: X53363; NID:q55854; PIDN:CAA37446.1; PID:q55855
A; Cross-references: EMBL: X53363; NID:q568-673; NID:q568-q73; N
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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A; Residues: 18-29 <TRE>
C; Superfamily: calreticulin
C; Keywords: calculum binding; glycoprotein
F;1-17/Domain: signal sequence *status predicted <SIG>F;18-416/Product: calreticulin *status experimental <MAT>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein A; Residues: 18-32 <NAK2>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A Status: preliminary
A Molecule type: mRNA
A; Residues: 1-416 <SOE>
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                                                                  A; Keference number: A40346; MUID:92002034
A; Accession: A40346
A; Molecule type: protein
A; Residues: 18-14, "R' <ROJ>
B; Krause, K.H.; Simmermen, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krause, K.H.; Simmermen, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krause, K.H.; Simmermen, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krause, K.H.; Simmermen, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krause, Rillarity of calreticulin with a Ca(2+)-binding protein that co-purif A; Reference number: S11475; MUID:90380058
A; Reference number: S11475; MUID:90380058
A; Residues: 18-122 <RRA>
A; Residues: 18-122 <RRA>
A; Residues: Laboraty, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Residues: Laboraty, Lianalated from GB/EMBL/DDBJ
A; Residues: Laboraty: translated from GB/EMBL/DDBJ
A; Residues: Laboraty: translated from GB/EMBL/DDBJ
A; Rosidues: Laboraty: Lianalated from GB/EMBL/DDBJ
A; Rosidues: Laboraty: Calaba
A; Rosidues: Laboraty: Lianalated from GB/EMBL/DDBJ
A; Rosidues: Laboraty: Laboraty: Lianalated from GB/EMBL/DDBJ
A; Rosidues: Laboraty: Calaba
A; Rosidues: Calaba
A; Rosidues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Calrettoulin precursor - rat

N.Alternate names: calcium-binding protein 3

S.Specials: Rattus norwedgicus (Norway rat)

C.Specials: Rattus (Noryay M.; Baba, T.; Michikawa, Y.; Yamanobe, T.; Arai, K.; Okinaga, S. Exp. Cell Res. 205, 101-110, 1993

A.Yitle: An endoplasmic reticulum protein, calreticulin, is transported into the acrosom A.Reference number: A49176; MUID:93202172

A.A.Cersalon: July 19819

A.A.Cersalon: July 19819

A.M.Chosa references: CB:D78308; NID:91089798; PIDN:BAAll345.1; PID:91845572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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A; Residues: 1-416 <NA2>
A; Crous-references: GB:D78308; NID:91089798; PIDN:BAA11345.1; PID:91845572
A; Experimental source: Sprague-Dawley, spermatogenic cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Cross-references: GDB:125179; OMIM:109091
A; Mup position: 19p13.3-19p13.2
A; Introns: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Superfamily: calreticulin
C;Kvywords: calclum binding; integrin binding
E;1:17/Domain: signal sequence #status predicted <SIG>
F;18-417/Product: calreticulin #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
100.0%; Score 971; DB 1;
Rest Local Similarity 100.0%; Pred. No. 3.3e-80;
Matches 180; Conservative 0; Mismatches 0;
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an expressible cDNA clone encoding ERp60/ca
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N.Alternate names: 55K calcium-binding reticuloplasmin; calregulin C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Decies: Mus musculus (house mouse)
C;Secies: S06763; JC144; PC1233; A57498
C;Stccession: S06763; JC14E.
EMBO J. 8, 3581-3586, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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A;Cross-references: GB:M92988; NID:g193084; PIDN:AAA37569.1; PID:g193085
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J. Blol. Chem. 270, 15956-15929, 1995
A;Title: Cell surface calreticulin is a putative mannoside lectin which
A;Reference number: A57498; MUID:95332280
                                             A; Molecule type: mRNA
A; Residues: 45-63, E', 65-83 <LIU>
A; Experimental source: brain, clone 8.1
C; Superfamily: calrettculin
C; Superfamily: calcium binding; glycoprotein
F; 37-400/Region: endoplasmic reticulum retention signal
F; 120-146/Disulfide bonds: #status experimental
F; 162/Binding site: carbohydrate (Asn) (covalent) #status experimental
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Pred. No. 1.6e-76;
5; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                       Score 930; DB 2; Length 400;
Pred. No. 1.6e-76;
3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues: 1-416 (SMI>)
A; Cross-references: EMBL:X14926; NID:950567; PIDN:CAA33053.1;
B; Mazzarella, R.A.; Gold, P.; Cunningham, M.; Green, M.
Gene 120, 217-225, 1992
A; Title: Determination of the sequence of an expressible cDNA
A; Reference number: JC1444; MUID:93013037
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F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-416/Product: calregulin #status experimental <MAT>
F;413-416/Region: endOplasmic reticulum retention signal
                        núcleic acid sequence not shown
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A;Residues: 74-80;142-151;186-193 <WHI>
C;Superfamily: calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95.8%;
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Best Local Similarity 95.0%;
Matches 171; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           calreticulin precursor - mouse
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Matches 170; Conservative
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A; Accession: S36801
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                                                                                                                                                                                                                                                                                                                           calreticulin precursor, skeletal muscle - rabbit
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Date: 10-Sep-1999 sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C; Accession: A34154; S13047
S; Filegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.
J; Biol, Chem. 264, 25152-21528, 1989
A; Title: Molecular cloning of the high affinity calcium-binding protein (calreticulin) c
A; Reference number: A34154; MUID:90094320
A; Ratus: preliminary
A; Molecule type: mRNA
A; Restaucs: 1-418 < FILD
A; Cross-references: GB:J05138; NID:g164858; PIDN:AAA31188.1; PID:g164859
B; Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; Melc
Biochem. J; 271, 473-480, 1990
A; Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-storage
A; Residues: 19-32 < FRES
C; Superfamily: calreticulin
C; Superfamily: calreticulin
C; Superfamily: calreticulin
C; Superfamily: signal sequence #status predicted <SIG>F; 1-17/Domain: signal sequence #status retention signal
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R.Liu, N.; Fine, R.E.; Johnson, R.J.
Bacchim. Biophys. Acta 1202, 70-76, 1993
A;Title: Comparison of cDNAs from bovine brain coding for two isoforms of calreticulin.
A;Reference number: S36799; MUID:93385184
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Cistatello Bos primingenius taurus (cattle)
Cispecies: Bos primingenius taurus (cattle)
Cispecies: Bos primingenius taurus (cattle)
Cisacession: 843376; 836801
R;Matsuoka, K.; Seta, K.; Yamakawa, Y.; Okuyama, T.; Shinoda, T.; Isobe, T. Biochem. J. 298, 435-442, 1994
A;Title: Covalent structure of bovine brain calreticulin.
A;Reference number: 843376; MUID:94183174
A;Molecule type: protein
A;Residues: 1-400 <MAT>
                                                      180
                                                                                                                                                                  SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                        SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC
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Pred. No. 1.3e-76;
1; Mismatches 7;
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Matches 172; Conservative
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K.; Gawinowicz, M.A.; Barzilai, A.; Karl,
                                                                     A,Molecule type: protein
A,Molecule type: protein
A,Residues: 'X',17-28,'X', 30-31 <KE2>
R;Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Kar
Blectrophoresis 10, 152-157, 1989
A,Title: Development of a database of amino acid sequences for proteins identified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          central nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Xenopus lacvis (African clawed frog)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Accession: S29130; T01068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72 QTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIF 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16 DPTVYFKEEF--GDDWAERWVESKHKSDLGKFVLTAGKFYGDAEKDKGIQTSQDARFYGL 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12 DGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSODARFYALSASFEPFSNKG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: EMBL:X67598; NID:g64610; PIDN:CAA47867.1; PID:g64611 A;Experimental source: CNS C;Superfamily: calcolor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 384;
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                                                                                                                                                                                                                                                                                                                       A Molecule type: protein
A; Residues: 'X',17-28, 'X', 30-31 <SWE>
C; Superfamily: calreticulin
C; Superfamily: calcium binding; endoplasmic reticulum
F;1-15/Domain: signal sequence #status predicted <SIG>F;16-405/Product: calreticulin #status experimental <MAT>F;402-405/Region: endoplasmic reticulum retention signal
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; Pred. No. 1.6e-64;
12; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82.8%; Score 804; DB 1; 79.4%; Pred. No. 3.9e-65;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ritreves, S.; Zorzato, F.; Pozzan, T.
Blochem. J. 287, 579-581, 1992
Affille: Identification of calreticulin is
A; Reference number: S29129; MUID:93074997
A; Accession: S29130
                                                                                                                                                                                                                                                        A; Reference number: A60977; MUID:89276264
A; Accession: F60977
A; Reference number: A94207; MUID:88320566
A; Accession: B31409
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A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
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85.2%;
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A, Residues: 1-384 <TRE>
A, Cross-references: EMBL:X67598
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Matches 144; Conservative
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Matches 143;
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C.Spection: Aplysia californica (California sea hare)
C.Spection: Aplysia californica (California sea hare)
C.Spection: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C.Accession: JH0795; B1409; F60977
E.K. Kuhl, D.; Barzilai, A.; Sweatt, J.D.; Kandel, E.R.
Nouron 9, 1013-1024, 1992
A.Hile: Long-term sensitiation training in aplysia leads to an increase in calreticulia Article: Long-term sensitiation training in aplysia leads to an increase in calreticulia Article: Long-term sensitiation training in aplysia leads to an increase in calreticulia Article: Long-term sensitiation training in aplysia leads to an increase in calreticulia Article: Long-term Sensitiation and antrain nervous system
A.Residuces: 1-405 <REN
A.Residuces: 1-405 <REN
A.Residuces: 1-405 <REN
A.Residuces: 1-405 <REN
A.Residuces: Bangliai, A.; Randel, E.R.; Sweatt, J.D.
A.Reinedy, T.R.; Gawinowicz, M.A.; Barzilai, A.; Kandel, E.R.; Sweatt, J.D.
Proc. Natl. Acad. Sci. U.S.A. 85, 7006-7012, 1988
A.Title: Sequencing of proteins from two-dimensional gels by using in situ digestion and tion in Aplysia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Calreticulin precursor (clone 3) - African clawed frog (fragment)
C.Sperios: Xenopus laevis (African clawed frog)
C.Sperios: Xenopus laevis (African clawed frog)
C.Sperios: Xenopus laevis (African clawed frog)
C.Sperios: S29129
R.Treves, S.; Zorzato, F.; Pozzan, T.
Biochm. J. 287, 579-581, 1992
A.Title: Identification of calreticulin isoforms in the central nervous system.
A.Reference number: S29129; MUID:93074997
A.References: EMBL:X67597; MID:94086.1; PID:964609
C.Superianity: calreticulin
C.Kerwords: glycoprofein
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                                                                                                                                                                               SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                                                                                                EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
                                                                            121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE
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83.9%; Pred. No. 6.2e-68;
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Matches 151; Conservative
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Length 406;

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A;Molecule type: DNA
A;Residues: 1-395 <BAU>
A;Cross-references: EMBL:AF125963; PIDN:AAD14746.1; GSPDB:GN00023; CESP:Y38A10A.5
A;Experimental source: strain Bristol N2; clone Y38A10A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Caenorhabditis elegans
C;Date: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
C;Accession: S25851; T33996
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                                                                                                                                                                                                                                                                                                                                         4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                       4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A,Cross-references: EMBL.X59589; NID:g6693; PIDN:CAA42159.1; PID:g6694 R; Bauer, C.; Courtney, L.; LaPlant, Y February 1999 submitted to the EMBL Data Library, February 1999 A; Description: The sequence of C. elegans cosmid Y38A10A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA Seq. 2, 235-240, 1992
A; #fitle: A C. elegans gene encodes a protein homologous to
A; Reference number: $25851; WUID:92329978
A; Accession: $25851
A,Introns: 65/1; 222/3
C;Superfamily: calreticulin
C;Keywords: calculum binding; endoplasmic reticulum
F;1-17/Domain: signal sequence #status predicted <516>
F;403-406/Region: endoplasmic reticulum retention signal
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F;1-15/Domain: signal sequence #status predicted <SIG>
F;392-395/Region: endoplasmic reticulum retention signal
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                                                                                                                                                                                            Score 699; DB 2;
Pred. No. 1.2e-55;
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                                                                                                                                                                                                                                                   14; Mismatches
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                                                                                                                                                                                            72.0%;
                                                                                                                                                                                                                                                Matches 132; Conservative
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A; Accession: T33996
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A; Molecule type: DNA
A; Residues: 1-395 <SMI>
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A; Introns: 107/3; 315/3
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Best Local Similarity
                                                                                                                                                                                            Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R; Smith, M.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Genetics:
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C;Species: Drosophila melanogaster
C;Date: 11-aug-1995 #sequence_revision 11-aug-1995 #text_change 13-aug-1999
C;Accession: A56637; A37158
R;Smith, M.J.
DNA Seq. 3, 247-250, 1992
A;Tile: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticulin h
A;Reference number: A56637; MUID:93208374
A;Reference number: A56637
A;Status: preliminary
A;Molecule type: DNA
A;Reterence number: B26637
A;Status: preliminary
A;Molecule type: DNA
A;Restdues: 1-406 <SMID
A;Cross-references: GB:X64461; NID:97685; PIDN:CAA45791.1; PID:97686
A;Note: sequence extracted from NCBI Dackbone (NCBIN:128274, NCBIP:128275)
B;McCaulliffe, D.P.; Zappi, E.: Lieu, T.S.; Michalak, M.; Sontheimer, R.D.; Capra, J.D.
J;Clin: Invest: 86, 332-335, 1990
A;Tile: A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly home
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: A37158
A; Status: preliminary; nucleic acid sequence not shown; not compared with conceptual tra
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 91-105, 'A', 107, 109-124; 182-183, 'L', 185-220 <MCC>
C; Genetics:
A; Genetics:
                                                                                                                                                                                                                                                                                                                                                              and expression in the liver of the frog, Rana
                                                                                                                                                                                                          C.Species: Raha rugosa (Korean frog)
C.Date: 29-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
R.Yamamoto, S.; Nakamura, M.
FEBS Lett. 387, 27-32, 1996
A.Title: Calnexin: its molecular cloning and expression in the liver of the frog, A.Reference annear: S71342; MUD:96234004
A.Reference and sequence not shown
A.Molecule type: mRNA
A.Residues: 1-419 < YAM>
A.Residues: 1-419 < YAM>
A.Residues: Energence and sequence not shown
A.Molecule type: mRNA
A.Residues: 1-419 < YAM>
A.Coss.references: EMBL:D78889; NID:91514956; PIDN:BAAl1425.1; PID:91514957
C.Superfamily: calreticulin
C.Keywords: calcium binding: endoplasmic reticulum
F.1-18/Domain: signal sequence #status predicted <ART>
F.305-213/Region: nuclear location signal
F.315-418/Region: endoplasmic reticulum retention signal
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    fruit fly (Drosophila melanogaster)

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  16; Indels
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80.6%; Pred. No. 2.1e-64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19;
                                                                                                                                                                                            calreticulin precursor - Korean frog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         calreticulin homolog precursor
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Best Local Similarity 80.6'
Matches 145; Conservative
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calreticulin.

mammalian

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Gaps

3;

Indels

36;

395;

Length

9

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C;Accession: T05705
R;Chen, F.; Hayes, P.M.; Mulroony, D.; Pan, A.
Plant Cell 6, 835-843, 1994
A;Title: Identification and characterization of cDNA clones encoding plant calreticul A;Reference number: 215422; MUID:94339696
A;Accession: T05705
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A; Residues: 1-421 CDRES
A; Cross-references: EMBL:X89813; NID:g927571; PIDN:CAA61939.1; PID:g927572
A; Cross-references: EMBL:X89813; NID:g927571; PIDN:CAA61939.1; FID:g927572
Submitted to the EMBL Data Library, November 1994
A; Description: Purification and sequencing of calreticulin from maize and evidence for A; Reference number: $49818
A; Reference number: $49818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Species: Zee mays (maize)
C; Date: 13-Jan-1996 #sequence_revision Ol-Mar-1996 #text_change 13-Aug-1999
C; Date: 13-Jan-1996 #sequence_revision Ol-Mar-1996 #text_change 13-Aug-1999
C; Accession: $58170
R; Dresselhaus, T.; Hagel, C.; Loerz, H.; Kranz, E.
submitted to the EMBL Data Library, July 1995
A; Description: 1solation of a cDNA encoding Calreticulin from in vitro zygotes of in A; Accession: $58170
                                                             calreticulin - barley (fragment)
C;Species: Hordeum vulgare (barley)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 11-May-2000
                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-415 <CHE>
A; Cross-references: EMBL:L27349; NID:g439587; PIDN:AAA32949.1; PID:g439588
A; Experimental source: cv. Morex, ovary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: DNA A;Residues: 1-421 <NAP>
A;Residues: EMBL:246772; NID:9577611; PIDN:CAA86728.1; PID:9577612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23 VFFQEKF--EDGWESRWVKSEWKKDENWAGEWNHTSCKWHGDAE-DKGIQTSEDYRFYAI 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 415;
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C; Superfamily: calreticulin
C; Keywords: calcium binding
F; 1-25/Domain: signal sequence *status predicted <SIG>
F; 1-87-Domain: signal sequence *status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55.5%; Score 539; DB 2; 56.4%; Pred. No. 3.5e-41;
                                                                                                                                                                                                                                                                                                                                                                 A; Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 56.4 Matches 101; Conservative
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C,Superfamily: calreticulin
C,Keywords: calcium binding
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C; Species: Hordeum vulgare (barley)

C; Species: Hordeum vulgare (barley)

C; Species: Hordeum vulgare (barley)

C; Accession: T05703

R; Chen, F.; Hayes, P.M.; Mulroony, D.; Pan, A.

Pilant Coil 6, 835-843, 1994

A; Title: Identification and characterization of cDNA clones encoding plant calreticulin A; Reference number: Z15422; MUID:94339696

A; Reference number: Z15422; MUID:94339696

A; Reference number: T05703

A; Reterence number: A; Residuation of CDNA clones encoding plant calreticulin A; Reference number: A; Residuation of CDNA clones encoding plant calreticulin A; Residuates: T05703

A; Residuation of CDNA clones encoding plant calreticulin A; Residuates: 1-412 < CHE>

A; Residuation of CDNA clones encoding plant calreticulin A; Residuates: 1-412 < CHE>

A; Residuation of CDNA clones encoding plant calreticulin A; Residuates: 1-412 < CHE>

A; Residuation of CDNA clones encoding plant calreticulin A; Residuation e
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
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9
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                                                             41K larval antigen - nematode (Onchocerca volvulus) (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55.9%; Score 542.5; DB 2 68.5%; Pred. No. 1.3e-41; tive 22; Mismatches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   158 IVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Bust Local Similarity 68.5
Matches 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Superfamily: calreticulin
Keywords: calcium binding
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C; Superfamily: calr
C; Keywords: calcium
77
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                                                 Query Match 55.2%; Score 536; DB 2; Length 421; Best Local Similarity 56.4%; Pred. No. 6.7e-41; Matches 101; Conservative 31; Mismatches 41; Indels
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US-09-828-000-7 189 1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35

Title: Perfect score: Sequence:

Scoring table:

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100059 seqs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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Bukaryota; Metuzoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus;
NCBI_raxID 10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE 93202172; PubMed 8453984;
Nakamura M., Moriya M., Baba T., Michikawa Y., Yamanobe T., Arai K.,
Oklinga S., Kobayashi T.,
"An endoplasmic reticulum protein, calreticulin, is transported into
                                                                                                                                                                                                                                                                                                                                                                                    P18418; P10452; 01-MAR-1989 (Rel. 10, Created) 01-MAR-1990 (Rel. 16, Last sequence update) 01-NOV-1990 (Rel. 15, Last sequence update) 01-NOV-1997 (Rel. 35, Last annotation update) (CALRETICULIN PRECURSOR (CRESS) (CALREGULIN) (HACBP) (ERP60) (CALBP) (CALCIUM-BINDING PROTEIN 3) (CABP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Structural homology between the rat calreticulin gene product and the Onchocerca volvulus antigen Ral-1."; Nucleic Acids Res. 18:4933-4933(1990).
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MEDLINE 90770496; PubMed 2395661;
Murthy K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
Holmes C., Patch Y.C.;
                                                                                                                                                                                                                                                                           Length 416;
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                                          PROSITE; PS00014; ER_TANGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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PREVENT SECRETION FROM ER.
24C03B00913408D8 CRC64;
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4 X APPROXIMATE REPEATS
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100.0%; Pred. No. 3.4e-19;
1ve 0; Mismatches 0;
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ProDom; PD001866; Calreticulin; 1.
InterPro; IPR001580; Calreticulin,
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                Pfam; PF00262; calreticulin; 1.
         IPR000886; ER_target.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-91054414; PubMed-2241926;
Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
"Calreticulin is a candidate for a calsequestrin-like function in
Ca2(+)-storage compartments (calciosomes) of liver and brain.";
Biochem. J. 271:473-480(1990).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ., Nagayama S., Kajiwara R., Kawaguchi Y., Horluchi R., i T.,
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MEDLINE-92360010; PubMed-1497655;
Nakamura M., Michlawa Y., Baba T., Okinaga S., Arai K.;
"Calreticulin is present in the acrosome of spermatids of rat
                                                                                                                                                                                                                                                                                                                                 Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
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PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPRAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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STRAIN SPRAGUE-DAWLEY; TISSUE Liver; MEDLINE 95181573; Pubmed 7876339;
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InterPro; IPR000886; Exterget.
Pfam; PP00262; calreticulin; I
PRINTS; PR00626; CALRETICULIN.
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EMBL; X13363; CAA37446.1; -.
EMBL; X13702; CAA31987.1; ALT_SEQ.
EMBL; X79327; CAA55890.1; -.
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STRAIN LEC; TISSUE Liver;
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S11205; S11205.
S13045; S13045.
A49176; A49176.
S45036; S45036.
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MEDLINE=92002034; PubMed=1911778;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-92129342; PubMed-1733953; MGCBuliffe D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; "The 5' flanking region of the human calreticulin gene shares homology with the human GRP78, GRP94, and protein disulfide isomerase
                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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01-AUG-1992 (Rel. 23, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CER55) (CALREGULIN) (HACBP) (ERP60) (52 KDA
RIBONUCLEOPROTEIN AUTOANTIGEN RO/SS-A).
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MEDLINE=92013129; PubMed=1919005;
ROkeach L.A., Haselby J.A., Meilof J.F., Smeenk R.J., Unnasch T.R.,
Greene B.M., Hoch S.O.;
"Characterization of the autoantigen calreticulin.";
J. Immunol. 147:3031-3039(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
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PREVENT SECRETION FROM ER.
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100.0%; Pred. No. 3.4e-19;
:Ive 0; Mismatches 0;
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    Clin. Invest. 85:1379-1391(1990).

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proteins.";
Rojiani M.V., Finlay B.B., Gray V., Dedhar S.;
"In vitro interaction of a polypeptide homologous to human Ro/SS-A
antigen (calreticulin) with a highly conserved amino acid sequence in
the cytoplasmic domain of integrin alpha subunits.";
Biochemistry 30:9859-9866(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Colon carcinoma;

MEDILINE-97295306; Pubmed-9150948;

MEDILINE-97295306; Pubmed-9150948;

"A two-dimensional gel database of human colon carcinoma proteins.";

"A two-dimensional gel database of human colon carcinoma proteins.";

Electrophoresis 18:605-613(1997).

-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM BINDING SITES.

-!- SUBBUNIT: MONOMER (BY SIMILARITY).

-!- SUBGELLICHAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

-!- SUBCHILLAR LOCATION: ENDOPLASMIC RETICULUM FAMILY.

-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.

-!- CAUTION: WAS ORIGINALLY (REF.2) THOUGHT TO BE THE RO AUTOANTIGEN.
                                                                                                                                                                                                                                                                                                MEDIINE-90380058; PubMed-2400400; Krause K. S., Simmerman H.K. B., Jones L.R., Campbell K.P.; Krause K.H., Simmerman H.K. B., Jones L.R., Campbell K.P.; Sequence similarity of calreticulin with a Ca2(+)-binding protein that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store in HL-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hochstrasser D.F., Frutiger S., Paquet N., Bairoch A., Ravier F., Pasquali C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas R., Appel R.D., Hughes G.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Microsequences of 145 proteins recorded in the two-dimensional gel protein database of normal human epidermal keratinocytes."; Electrophoresis 13:960-969(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rasmussen H.H., van Damme J., Puype M., Gesser B., Celis J.E.,
Vandekerckhove J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Human liver protein map: a reference database established by microsequencing and gel comparison."; Electrophoresis 13:992-1001(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PARTIAL SEQUENCE OF 25-34; 56-62; 208-221 AND 273-278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PRO0626; CALRETICULIN.
PRODON; PD001866; CALTECICULIN; 1.
PROSITE; PS00014; ER_PRGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=93162045; PubMed=1286669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Keratinocytes;
MEDLINE=93162043; PubMed=1286667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M84739; AAA51916.1; -...
EMBL; M32294; AAA36582.1; -...
EMBL; AD000092; AAB51176.1; -...
PIR; A37047; A37047.
PIR; S11475; S11475.
PIR; A42330; A42330.
PIR; A46452; A46452.
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Aarhus/Ghent-2DPAGE; 9401; IEF
HSC-2DPAGE; P27797; HUMAN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biochem. J. 270:545-548(1990)
                                                                                                                                                                                                                                                             SEQUENCE OF 18-32.
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1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
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DISULFID
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MEDLINE-90094320; PubMed 2600080;
Filegel L., Burns K., Maclennan D.H., Reithmeter R.A.F., Michalak M.;
"Molecular cloning of the high affinity calcium-binding protein
(calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Biol. Chem. 264:21522-21528(1989).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oryciolagus cuniculus (Rabbit).
Eukaryota, Matazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Fust-twitch and slow-twitch skeletal muscles express the same isoform of calreticulin."; Blocker, Biophys. Res. Commun. 177:979-984(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
                                                                                                                                                                                                                                                                                            ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
MISSING (IN REF. 3).
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CALRETICULIN_2; 1.
CALRETICULIN_REPEAT; 3.
ilum; Calcium-binding; Repeat; Signal.
                                                                                      N-DOMAIN,
P-DOMAIN,
C-DOMAIN,
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                              3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                               Score 189; DB 1;
Pred. No. 3.4e-19;
; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        418 AA.
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                                                                        CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE FEST-twitch skeletal muscle;
MEDLINE 91282795; Pubmed 2059224;
Fliegel L., Michalak M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
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MEDLINE 91201375; PubMed 2016321;
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Best Local Similarity 100.0
Matches 35; Conservative
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                                        Endoplasmic reticulum;
                                                                                                                                                                                                                                                                                                                                               35
417 AA;
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                      PS00805;
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P15253;
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                      PROSITE;
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EXMAIN
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the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
modified and this statement is not removed. Usage by and for commercial
entities requires a license agreement (See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                                                                             Guan S., Falick A.M., Williams D.E., Cashman J.R.;

"Evidence for complex formation between rabbit lung flavin-containing monooxygenase and calreticulin.";

Biochemistry 30:8892-9900(1991).

-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.

-!- SUBUNIT: MONOMER (BY SIMILARITY).

-!- SUBUNIT: BELONGS TO THE CALRETICULIN FAMILY.
Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L., Vance J.E., Opsa M., Michalak M.; "Calreticulin, and not calsequestrin, is the major calcium binding protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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B6082B689DC763A6 CRC64;
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P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
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Pred. No. 3.4e-19;
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BY SIMILARITY.
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PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
                                                                                                                                    Blol. Chem. 266:7155-7165(1991).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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                                                                                                                                                                                                              TISSUE-Lung;
MEDLINE-92002038; PubMed 1911780;
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Best Local Similarity 100.0%;
Matches 35; Conservative 0
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PIR, C33208, C33208.
PIR, B33208, B33208.
PIR, F33208, B33208.
PIR, S13046, S13046.
PIR, S13047, S13047.
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SEQUENCE

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15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                   Mammalia; Eutheria; Cetartiodactyla; Ruminantla; Pecora; Bovoldea; Bovinae; Bos. MoBI_TaxID=9913;
                                                                                                                                                                                Bos taurus (Bovine).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                             Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED (GLCNAC. .) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 184; DB 1; Length 421;
Pred. No. 1.7e-18;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALRETICULIN, BRAIN ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                 ## PF0025: calreticulin; 1.

PRINTS: PR00626; Calreticulin; 1.

PROSTE: PS00014; ER_TRGET; 1.

PROSITE; PS00803; CALRETICULIN.; 1.

PROSITE; PS00803; CALRETICULIN.; 1.

PROSITE; PS00805; CALRETICULIN.; 1.

PROSITE; PS00805; CALRETICULIN.2; 1.

PROSITE; PS00805; CALRETICULIN.2binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C-DOMAIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1-4.
3 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ASP/GLU/LYS-RICH.
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       406 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-DOMAIN.
P-DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                              MEDLINE=93385184; PubMed=8373827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 97.4%;
Best Local Similarity 97.1%;
Matches 34; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48812
                                                                                                                                                                                                                                                                                                                                                                                EMBL; L13462; AAC37307.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         312
201
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                                                                                                       SEQUENCE FROM N.A.
                                                                                                                   TISSUE-Brain;
                                                                                                                                                                       calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRTC_DROME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REPEAT
REPEAT
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ID CRTC_I
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0
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PREVENT SECRETION FROM ER (POTENTIAL).
7D4B68DFC689EEF1 CRC64;
                                                                                                   01-0cT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1996 (Rel. 34, Last sequence update)
CALRETICULIN, BRAIN ISOFORM 1 (CRP55) (CALREGULIN) (HACBP).
Bos taurus (Bovine).
Businaryotas Metacoa; Chordata; Craniata; Vertebrata; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidea;
Bovidae: Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Calcium-binding; Repeat; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 184; DB 1; L. Pred. No. 1.6e-18; 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASP/GLU/LYS-RICH.
 146 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPNN 163
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                             400 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 32, Created)
(Rel. 32, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C-DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-DOMAIN
                                                                              PRT;
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ilarity 97.1%;
Conservative
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                                                                              STANDARD;
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221
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400 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
nes 34; Conserv
                                                                                                                                                                                                            NCBI_TaxID=9913;
                                                                                                                                                                                                                                                   TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRT2_BOVIN
P42918;
01-NOV-1995 (
01-NOV-1995 (
                                                                            CRT1_BOVIN
P52193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Si
Matches 34,
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DISULFID CARBOHYD SEQUENCE

9

RESULT

CRT2_BOVIN

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8

DOMAIN

REPEAT REPEAT REPEAT REPEAT REPEAT

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KR. ANDIGNEE FORDER 10731132;

KR. ANDIGNEE SUBJOSOGO, PUDDED-10731132;

KR. Adams M.D., Celniker S.E., Li P.W., Hoskins R.A., Galle R.F.,

Adams M.D., Celniker S.E., Richards S., Ashbunner M., Henderson S.N.,

R. Adams M.D., Celniker S.E., Richards S., Ashbunner M., Henderson S.N.,

R. Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,

R. Button G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,

R. Button G.G., Mortman J.R., An H.-J., Andrews-Pfannkoch C., Baldwin D.,

R. Buttis M.C., Busam D.A., Barenan B.P., Bhandari D., Bolshakov S.,

R. Burtis M.C., Busam D.A., Daller H., Caddeu E., Center A., Chadra I.,

R. Buttis M.C., Busam D.A., Daller G., Davenport L.B., Dustis P.,

R. Buttis M.C., Busam D.A., Daller G., Davenport L.B., Dustis P.,

R. Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dun P.,

R. Doup L.E., Downes M., Dayan-Rocha S., Dunkov B.C., Dun P.,

R. Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C.,

R. Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C.,

R. Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C.,

R. Dodson K., Doup L.E., Downes M., Dayan-Rocha S., Dunkov B.C.,

R. Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C.,

R. Dodson K., Doup L.E., Downes M., S., Gelbart W.M., Glasser K.,

R. Juli M., Kalush F., Karpen G.H., Re S., Kontho D., Lai Z.,

R. Liu K., Harvoy D., Heiman T.J., Hernandez J.R., Houck J.,

R. Hurtis M.L., Harvoy D., Heiman T.J., Hernandez J.R., Houck J.,

R. Mutko P., Lai Y., Karpen G.H., Re S., Kontho D., Lai Z.,

Lauko P., Lai Y., Karpen G.H., Ravitz S., Kulp D., Lai Z.,

Lauko P., Lai Y., Karpen G.H., Re S., Kontho D., Lai Z.,

R. Mutko P., Lai Y., Karpen G.H., Re S., Rouler E., Shen H.,

R. Palaxolo M., Pittama G.S., Pan S., Pollard J., Hoston D.,

R. Mutkur S.M., Moy M., Mutphy B., Worley B., Worley R., Wutphy R.,

R. Wander E., Woodage T., Saunders R., Venter E., Wang A., Wutliams S.H., Woodage T., Saunders R.,

R. Will S.M., Woodage T., Stone R., Saunders R.,

R. Scheeler F., Sch
                                                                                                                                                                           Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Trachasta; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroideu; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *A human RO/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercal RAL-1 antigen and an aplysia 'mremory molecule'."

"Invest. 86:332-335(1990).

-I- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW PRINTY CARCIUM-BINDING SITES.

-I- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

-I- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM FAMILY.
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McCauliffo D.P., Zappi E., Lieu T.S., Michalak M., Sonthelmer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ಥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleotide sequence of a Drosophila melang contergene encoding valreticulin homologue,";
                      01-ARR-1993 (Rel. 25, Created)
01-OCT-1993 (Rel. 27, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALNETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE-93208374; Pubmed:1296819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 91-124 AND 182-220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Science 287:2185-2195(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA Seq. 3:247-250(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                calreticulin homologue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                              Ephydroidea; Dros
P29413: 09VHA3:
                                                                                                                                                     CRC OR CG9429.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Capra J.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                Smith M.J.
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its way non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE=94341871; PubMed=7520419;
REDALINE=94341871; PubMed=7520419;
REDALOPES Of the Onchocerca volvulus RAL1 antigen, a member of the calrettculin family of proteins, recognized by sera from patients with onchocerciasis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchocercidae; Onchocerca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83.6%; Score 158; DB 1; Length 406; 82.9%; Pred. No. 7.6e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3; Indels
                                                                                                                                                                                                                                                                       InterPro; IPR01580; Calrettculin.
InterPro; IPR01580; Calrettculin.
InterPro; IPR00886; ER_target.
Pfam; PP00262; Calrettculin; 1.
ProDom; PD001866; Calrettculin; 1.
PROSTTE; PS00014; ER_TARGET; 1.
PROSTTE; PS00804; CALRETICULIN_1; 1.
PROSTTE; PS00805; CALRETICULIN_2; 1.
PROSTTE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65D72C69D0BEC427 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -> A (IN REF. 3).
-> L (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUL-1989 (Rel. 11, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  146 VIFSYKGKNHLISKDIRCKDDVYTHFYTLIVRPDN 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    388 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Infect. Immun. 62:3696-3704(1994).
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                                                                                                                                                                                                          EMBL; AE003683; AAF54416.1; -. PIR; A37158; A37158.
FlyBase; FBgn0005585; Crc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46808 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 53-388 FROM N.A
                                                                                                                                                                                     EMBL; X64461; CAA45791.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  406 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=6282;
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P11012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
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HSSP; P00268; 4RXN.
                                                                                                                                                                                                                                                                                                                                                                                                           393 AA;
                                                                                                                                                                                 PROSITE; PS00014;
PROSITE; PS00803;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-AUG-1992
01-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRTC_CAEEL
P27798;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Si
Matches 27;
                                                                                                                                                                                                                                                                                                                                        REPEAT
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                       CONFLICT
                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
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                                                                                                                                                                                                                                                                                                          DOMAIN
REPEAT
                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                  REPEAT
REPEAT
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 removed. Usage by and for commercial ent (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 CRTC_SCHMA STANDARD; PRT; 393 AA.
006814; 026562; 02624 (Rel. 29, Created)
01-NOV-1994 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
01-NOV-1997 (Rel. 36, Last annotation update)
CALERTICULIN PRECURSOR (SM4 PROTEIN).
SCHISTOSOMA manson1 (Blood fluke).
SCHISTOSOMA manson1 (Blood fluke).
Eukaryota: Metazoa; Platyhelminthes; Turbellarian Platyhelminths;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochem. Parasitol. 62:313-315(1993).
FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN-BURRON RICAN;
MEDLINE-94187805; Pierce R.J., Godin C., Capron A.;
Khallfe J., Pierce R.J., Godin C., Capron A.;
"Cloning and sequencing of the gene encoding Schistosoma mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rhabditophora; Bulecithophora; Revertospermata; Mediofusata;
Neodermata; Trematoda; Digenea; Strigeidida; Schistosomatoidea;
Schistosomatidae; Schistosoma.
                                                                                                                                                                                                                                                                                                                             ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Khalife J., Trottein F., Schacht A.-M., Godin C., Pierce R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Capron A.; "Cloning of the gene encoding a Schistosoma mansoni antigen
                                                                                                                                                                                                                                                                                                        Length 388;
                                                                                                                                                                                                                                                                                                                              6; Indels
                                                                                                                                                                                                                                                                  SIMILARITY.
9537F298A2D31CD6 CRC64;
                                                                                                                                                   RAL-1 PROTEIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                       ARG/LYS-RICH (BASIC).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                        Score 139; DB 1;
Pred. No. 3.4e-12;
                                                                                                                                                                                                                                                                                                                                                            PIR; A32507; A32507.
InterPro; IPR01580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; P0001866; CALRETICULIN.
PROSITE; P500803; CALRETICULIN.
PROSITE; P500804; CALRETICULIN.
PROSITE; P500805; CALRETICULIN.2; 1.
                                                                                                                                                                                                                                                                                                                                               1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               homologous to human Ro/SS-A autoantigen.";
Mol. Biochem. Parasitol. 57:193-202(1993).
                                                                                                                               Repeat; Antigen; Signal.
modified and this statement is not removentities requires a license agreement (Sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-93165070; PubMed-8433712;
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                                                                                                                                                                                                                                                                            Σ.
                                                                                                                                                                                                                                                                                                         73.5%;
74.3%;
                                                                                                                                                                                                                                                                           45298
                                      EMBL; M20565; AAA59056.1;
                                                                                                                                                                                                                                                                                                                             Conservative
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253
200
219
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253
253
2295
267
281
281
388
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STRAIN-PUERTO RICAN;
                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 26; Conserv
                                                                                                                                                                                                                                                                           388 AA;
                                                                                                                                 Calcium-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID-6183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                calreticulin.
                                                                                                                                                                                                                                                        DOMAIN
DISULFID
SEQUENCE
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REPEAT
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CRTC_SCHMA
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPBAT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
SIGNAL 1 16 POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
NCBI_TaxID=6239;
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"A C. elegans gene encodes a protein homologous to mammalian calreticuli.":
DNA Seq. 2:235-240(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 393;
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3 x 11 AA APPROXIMATE REPEATS.
2-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CALRETICULIN.
4 X 12 AA APPROXIMATE REPEATS.
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45F59857C21940D2 CRC64;
SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MV -> IL (IN REF. 2)
MISSING (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    / Match 73.0%; Score 138; DB 1; Local Similarity 77.1%; Pred. No. 4.8e-12; nes 27; Conservative 2; Mismatches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Rel. 23, Last sequence update)
(Rel. 28, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                               ER_TARGET; 1.
CALRETICULIN_1; 1.
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                                                                                                                                                                                                                                                                                                                 Interpro; IPR001580; Calreticulin.
Interpro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                       ProDom; PD001866; Calreticulin; 1.
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MEDLINE=92329978; PubMed=1627827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-AUG-1992 (Rel. 23, Created)
                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W.
                                                                                                                                                                                                                                         EMBL; M93097; AAA29854.1; -. EMBL; L24159; AAA19024.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45397
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CRTC_BETVU
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            SO THE FET HER DESCRIPTION OF THE PRESENT OF THE PR
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                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to licenseelsb-sib.ch).
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FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
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Chlamydomonadaceae; Chlamydomonas.
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"Cloning and Characterization of a cDNA encoding Chlamydomonas
reinhardtii calreticulin.";
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 395;
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PRODON: PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TANGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
POTENTIAL.
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BY SIMILARITY.
PREVENT SECRETION FROM ER
35CA7D2ECID56B03 CRC64;
                                    LOW AFFINITY CALCIUM-BINDING SITES.
SUBCELLUIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 X APPROXIMATE REPEATS. 2-1.
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Pred. No. 8.9e-11;
3; Mismatches 8;
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(Rel. 40, Last sequence update)
(Rel. 40, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FIR: S43831; S42831.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Ptam; PF00262; calreticulin; 1.
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X
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68.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45616
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395 AA;
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Bost Local Similarity
Matchos 24; Conserv
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20 - AUG - 2001
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Q9STD3;
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Submitted (OCT-1997) to the FMBL/GenBank/DDBJ databases.
-- FUNCTION: THIS PROTEIN BINDS CALCIUM: THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBGELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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PREVENT SECRETION FROM ER (POTENTIAL).
DD3BA3AFFBF61C9B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotá, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophyllidae; Caryophyllales; Chenopodiaceae; Beta.
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60.0%; Pred. No. 2.5e-10;
ive 7; Mismatches 7; Indels
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20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
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PRODOM; PRO01866; CALTELICULIN; 1.
PROSITE; PSO0014; ER TARGET; 1.
PROSITE; PSO0803; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AJ000765; CAB54526.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000866; ER_target.
Pfam; PF00262; calreticulin; 1.
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Mendel; 32549; Betvu;1166;32549
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081919;
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Best Local Similarity
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Q9XF98;
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A InterPro; IPR00158v,

A InterPro; IPR000886; ER_La.

DR Pfam; PF000265; Calreticulin; 1.

DR PROSTE; PR000626; Calreticulin; 1.

DR PROSTE; PS000014; ER_TARGET; 1.

DR PROSTE; PS00804; CALRETICULIN_1; 1.

DR PROSTE; PS00804; CALRETICULIN_2; 1.

DR PROSTE; PS00805; CALRETICULIN_2; 1.

DR PROSTE; PS00805; CALRETICULIN_2; 1.

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26 416 CALRETICULIN.

CALRETICULIN.

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To A 16 CALRETICULIN.

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Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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4 x 12 AA APPROXIMATE REPEATS.
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1-2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dictyostelium discoideum (Slime mold).
Eukaryota; Mycetozoa; Dictyosteliida; Dictyostellum.
NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , Last sequence update)
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PRINTS; PR00626; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 1.
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InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last seq
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Q23858;
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PROSITE; PS00014; ER_TARGET: 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPRAY; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                           Gaps
                                                                                                   BY SIMILARITY.
PREVENT SECRETION FROM ER (POTENTIAL).
BAF273694FB6FG37 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
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H
                                                                                                                                                                                                           Score 108.5; DB 1; Length 424; Pred. No. 7.3e-08; 6; Mismatches 8; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 421;
  1-4.
3 X 11 AA APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4F5F94CBAA6C6690 CRC64;
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Pred. No. 1.2e-07;
                                                                                                                                                                                                                                                                                                                            (Rel. 40, Last sequence update) (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                       1 VIFNYKGKNVLINKDI-RCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                421 AA.
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
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                                                                                                                                                                                                                Query Match 57.4%;
Best Local Similarity 58.3%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Apricot)
                                                                                                                                               48350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-AUG-2001 (Rel. 40, L. CALRETICULIN PRECURSOR.
257
298
270
284
284
137
424
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                                                                                                                                               424 AA;
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us-09-828-000-7.rsp

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Prim, PRO0265; calreticulin; 1.
PRONDM; PRO01866; Calreticulin; 1.
PROSITE; PS00014; RR_TARGET; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
REGORDAL CRITICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
REGORDAL CRITICULIN_3; CALCHUM_2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ricinus communis (Castor bean).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Kosidae;
eurosida I; Malpighiales; Euphorbiaceae; Ricinus.
      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE.97435975; Pubmed 9290642; Coughlan S.J., Hastings C., Winfrey R. Jr.; Cloning and characterization of the calreticulin gene from Ricinus communis L.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
DDSF452E76CC7FRC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plant MOI. Biol. 34:897-911(1997).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LAW AFFINITY CALCIUM-BINDING SITES,
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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51.5%; Pred. No. 2.2e-07;
tive 7; Mismatches 9; Indels
      Indels
   10;
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20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALKFTICULIN PRECURSOR.
                                                                                                                                                                                                                                                                        415 AA
5; Mismatches
                                                                                        2 IFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34
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CALRETICULIN.
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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52 N-
152 N-
415 PR
47522 MW;
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Best Local Similarity 51.58
Matches 17; Conservative
Matches 18; Conservative
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P93508;
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SEQUENCE
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Search completed: January 9, 2002, 15:12:16 Job time: 658 sec

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Lampetra reissneri.
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026688 aplysia cal
026688 amblyomma a
091711 xenopus lae
091710 xenopus lae
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091710 xenopus lae
090015 drosophila
090015 schistosoma
045014 schistosoma
045014 schistosoma
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Q41799 zea mays (m
Q43712 zea mays (m
Q40040 hordeum vul
Q40041 hordeum vul
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018478 litomosoide
097372 dirofilaria
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                                                                                                           Search time 78.15 Seconds (without alignments) 65.509 Million cell updates/sec
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version 4.5
- 2000 Compugen Ltd
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Maximum Match 100%
Listing first 45 summaries
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Q91710
Q91916
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Q41799
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sp_unclassified:*
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sp_human:*
sp_invertebrate:*
GenCore
Copyright (c) 1993
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sp_phage:*
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sp_bacteria:*
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sp_virus:*
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Match
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Maximum DB
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        brassica na 025202

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ALIGNMENTS

Gaps SEQUENCE FROM N.A. MEDLINE=20063780; PubMed=10594174; Kuraku S., Hoshiyama D., Katch K., Suga H., Miyata T.; "Monophyly of lampreys and hagfishes supported by nuclear DNA-coded Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia; Petromyzontiformes; Petromyzontidae; Lampetra. 0; Length 318; Indels C88102EA1CAC1506 CRC64; Last sequence update) Last annotation update) 91.5%; Score 173; DB 13; 94.1%; Pred. No. 3.4e-16; ive 1; Mismatches 1; EMBL, ABG05328; BAA88481.1; -InterPro; IPR001086; ER_target.
InterPro; IPR001080; Calreticulin.
Pfan; PF00262; Calreticulin, 1.
PRINTS; PR00626; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN_REPEAT; 3.
PROSITE; PS0044; ER_TARGET; UNKNOWN_1.
SEQUENCE 318 AA; 36997 MW; C88102EAICACI 318 AA 1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34 Created) J. Mol. Evol. 49:729-735(1999) 01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TrEMBLrel. 13, 01-JUN-2001 (TrEMBLrel. 17, Query Match
Best Local Similarity 94.1
Matches 32; Conservative PRELIMINARY; CALRETICULIN (FRAGMENT).

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Query Match 88.9
Best Local Similarity 85.7
Matches 30; Conservative
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Best Local Similarity
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Q91711;
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                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

Susan J.M., Just M.L., Lennarz W.J.;

Susan J.M., Just M.L., Lennarz W.J.;

Susan J.M., Just M.L., Lennarz W.J.;

"Cloning and Characterization of AlphaP Integrin and Calreticulin in
"Cloning and Characterization of AlphaP Integrin and Calreticulin."

In Submitted (Aug.1999) to the EMBL, GenBank/DDBJ databases.

In Submitted (Aug.1999) to the EMBL, GenBank/DDBJ databases.

R EMBL, AF177915, AAD55725.1; -

R InterPro; IPR000886; ER_target.

R InterPro; IPR000886; ER_target.

R InterPro; IPR001580; Calreticulin.

R PRINTS; PR00626; Calreticulin; 1.

R PRODOM; PR00186; Calreticulin; 1.

R PROSTIE; PS00804; CALRETICULIN.2; 1.

R PROSTIE; PS00805; CALRETICULIN.2; 1.

R PROSTIE; PS00805; CALRETICULIN.2; 1.
                                                                                                                                                                                               Strongylocentrotus purpuratus (Purple sea urchin).
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinocea; Echinoida; Strongylocentrotus.
Strongylocentrotus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aplysiu culifornicu (California sea hare)
Eukaryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplysiidae; Aplysia
NCBI_TaxID 6500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDITNE 93098937; PubMed 1463604; Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.; "Long-term senaltization training in Aplysia leads to an increase in realreticulin, a major presynaptic calcium-binding protein."; Neuron 9:1013-1024(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0626; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.Z; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS008014; ER_TARGET; UNKNOWN_1.
SEQUENCE 405 AA; 46738 MM; 14CAAZ01840DID69 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421 CALRETICULIN.
48822 MW; 172C664F59F41F93 CRC64;
                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1996 (TrEMBLrol. 01, Created)
01-NOV-1996 (TrEMBLrol. 01, Last sequence update)
01-JUN-2001 (TrEMBLrol. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89.4%; Score 169; DB 5; L
88.6%; Pred. No. 1.7e-15;
tive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145 VIFNYKGKNLLIKKDIRCKDDEFTHLYTLIVKSDN 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                405 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL,
                                                                     Created)
   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
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InterPro; IPRO00886; ER_target.
InterPro; IPRO01580; Calreticulin.
Ptum; PF00262; calreticulin; 1.
                                                           01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TREMBLrel. 13, 01-UNW-2001 (TREMBLrel. 17, CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 88.6
Matches 31; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421 AA;
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089060
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                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 49-410 FROM N.A.
TISSUE-SALIVARY GLANDS;
JAWYESKI D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN 1998 (TEMBLIC). 05, Last sequence update)
01-JAN 1998 (TEMBLIC). 17, Last sequence update)
01-JIN-2001 (TEMBLIC). 17, Last annotation update)
CALRETICULIN (FRAGMENT).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
Parasitiformes; Ixodida; Ixodidae; Amblyomma.
NCBI_TaxID-6943;
2.2e-15; Length 405;
2.2e-15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 410;
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TISSUE-SALIVARY GLANDS;
Fain-Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; U07708, AAC79004.1; ...
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
TISSUE SALIVARY GLANDS;
Jaworski D.C.;
Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PFGM; PF00262; calreticuln; 1.
PRINTS; PR00626; Calreticuln; 1.
PRODINS; PR001866; Calreticuln; 1.
PROSITE; PS00803; CALRETICULN.1; 1.
PROSITE; PS00805; CALRETICULIN.REPER; 3.
PROSITE; PS00014; ER_TARETICULIN.REPER; 3.
SEQUENCE 410 AA; 47485 MW; 32CCB6750A17DC54 CRC64;
                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 168; DB 5;
Pred. No. 2.2e-15;
                                                                                                                          145 VIFNYKGKNHLINKEIRCKDDVFTHLYTLIVKPDN 179
Score 168; DB
Pred. No. 2.2e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    343 AA
                                                                                                                                                                                                                                                                      410 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1998 (TrEMBLrel. 05, Created)
                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Insect Physiol. 41:369-375(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                      PRT;
88.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88.9%;
88.6%;
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                                                                                                                                                                                                                                                                      PRELIMINARY;
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Gaps

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Drosophila melanogaster (Fruit fly).
Eukaryota: Metazoa: Arthropoda: Tracheata: Hexapoda: Insecta:
Pteryota: Neoptera: Endopterygota: Diptera: Brachycera: Muscomorpha;
Ephydroidea: Drosophilidae; Drosophila.
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rubinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.;
"Genes Dependent on Zebrafish cyclops Function Identified by AFLP
Differential Gene Expression Screen.";
Geneals 0.0-0(1999).

EMBL: AF195882: AAF13700.1; -.
InterPro: IPR000886: ER_target.
InterPro: IPR001580; Calreticulin.
PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 158; DB 5; Length 406;
Pred. No. 5.4e-14;
3; Mismatches 3; Indels
  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases. EMBL, AB000718; BAA85379.1; -. FlyBase; FBgn0005585; Crc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
SEQUENCE 406 AA; 46809 MW; 68BA49A6B81CC427 CRC64;
                                                                                                                                                                                                                                                                                                01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=OREGON-R;
Dodo K., Sakoyama Y., Gamo S.;
"Drosophila melanogaster calreticulin for mRNA.";
  4 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             141 VIFQYKKKNLQINKDIRCKDDSFTHLYTLIVRPDN 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417 AA
                                                                                                                                                                                                                                               406 AA
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                                                         1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3; Mismatches
  1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00803; CALRETICULIN_1; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PS00804; CALRETICULIN_2; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Interpro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; I.
PRIMTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83.68;
82.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match
Best Local Similarity 82.99
30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                     CALRETICULIN.
CRC OR CG9429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                            090916;
                                                                                                                                                                                                                                            090916
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  Matches
                                                                                                                                                                                            RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                            Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
  Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
CALRETICULIN.
891DA66E00EBBEFA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     343 343
343 AA; 40105 MW; 3E7DDAFA33B91DE1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 161; DB 13;
Pred. No. 2.1e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 161; DB 13;
Pred. No. 1.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118 VIFQYKKKNLQINKDIRCKDDSFTHLYTLIVRPDN 152
                                                                                                                                                                                                                                                                                             EMBL, X67598; CAA47867.1; —
Interpro, IPR001580; Calreticulin.
Pram, PF00262; calreticulin, 1.
ProDom; PR00626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.2; 1.
PROSITE; PS00803; CALRETICULIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS00804; CALRETICULIN_2; 1.
PS00805; CALRETICULIN_REPEAT; ?
PS00014; ER_TARGET; UNKNOWN_1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-BRAIN;
MEDLINE-93074997; Pubmed-1445218;
                                                                                                                                      TISSUE-BRAIN;
MEDLINE-93074997; PubMed-1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biochem. J. 287:579-581(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48344 MW;
                                                                                                                                                                                                                                                                         Biochem. J. 287:579-581(1992).
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85.7%;
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85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 85.77
Matches 30; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xenopodinae; Xenopus.
NCBI_TaxID=8355;
                               Kenopodinae; Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           411 AA;
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Best Local Similarity
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                                                                                                         SEQUENCE FROM N.A.
                                             NCBI_TaxID=8355;
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Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood K., Berty C., Fullkrug R., Beck B.;
"Calreticulin is a hookworm allergen.";
Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
EMBL. AJ006799; CAA07244.1;
InterPro; IPR001886; ER_target.
InterPro; IPR001886; ER_target.
InterPro; IPR001889; Calreticulin.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 396;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                Scott J.C.;
Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                              Prodom; PD01866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
SEQUENCE 396 AA; 45813 MW; C57394C6FB4CD77B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
21F38B0515487B6F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 153; DB 5;
Pred. No. 2.7e-13;
2; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 153; DB 5;
Pred. No. 2.6e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        145 VIFNYKGONHLIKKDIPCKDDGKTHLYTLIVRPDN 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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PRODOM; PD001866, Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
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                                                                                                                                  EMBL; AF044408; AAC00515.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                81.0%; Scur.
82.9%; Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16 PC
46833 MW;
                                                                                                                                                                                                               Pfam; PF00262; calreticulin; 1 PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81.0%;
82.4%;
                        SEQUENCE FROM N.A. STRAIN-PHILIPPINE (MINDORO);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
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Matches 29; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     403 AA;
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Matches 28; Conserv
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SIGNAL 1
SEQUENCE 403 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
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Q98984
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Schistracoma japonicum (Blood fluke).
Brikaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Fremitoda; Digenea; Strigeldida; Schistosomatoidea; Schistosomatidae;
Schintosoma.
NCBI, TaxID 6182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RAL-1.
Schistosoma japonicum (Blood fluke).
Eukaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
                                                                                                                                                                                                                                                                                               Gaps
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0
                                                                                                                                                                                                                                        DB 13; Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A Huggins M.C., Moloney N.A.;
Submitted (AuG-1993) to the EMBL/GenBank/DDBJ databases.
KNBL, M86524; AAA2917.1;
InterPro; IPR001586; ER_target.
InterPro; IPR001586; Calreticulin.
Fum; PR00525; CALRETICULIN; I.
PRINTS; PR00625; CALRETICULIN; I.
PROSTIE; PS00803; CALRETICULIN; I.
PROSTIE; PS00803; CALRETICULIN; I.
PROSTIE; PS00804; CALRETICULIN.2; I.
ROSTIE; PS00805; CALRETICULIN.2; I.
ROSTIE; PS00805; CALRETICULIN.2; I.
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                                                                                                                                                                                                                                                                                             Indels
                      PD001866; Calreticulin; 1.
PS00803; CALRETICULIN_1; 1.
PS00804; CALRETICULIN_2; 1.
PS00804; CALRETICULIN_EREAT; 3.
PS00014; ER_TARGET; UNKNOWN_1.
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01-JUN-1998 (TrEMBLrel. 06, Created)
01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81.0%; Score 153; DB 5; 82.9%; Pred. No. 2.3e-13;
                                                                                                                                                                                                                                     Query Match 81.5%; Score 154; DB 13
Best Local Similarity 82.4%; Pred. No. 2e-13;
Matches 28; Conservative 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   350 AA
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PR00626; CALRETICULIN
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Matches 29; Conservative
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SEQUENCE
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SEQUENCE FROM N.A.
MEDLINE=99094497; PubMed=9879888;
Tsuji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;
"Molecular characterization of a calcium-binding protein from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kuraku S., Hoshiyama D., Katoh K., Suga H., Miyata T.;
"Monophyly of lampreys and hagfishes supported by nuclear DNA-coded
                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioldea;
Onchocercidae; Dirofilaria.
NCBI_TaxID=6287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Hyperotreti; Myxiniformes; Myxinidae; Eptatretinae; Eptatretus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 387,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CALRETICULIN.
E7741BF6AAFA5885 CRC64;
                                                                                                                                                                                                                          01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-UN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
77.1%; Pred. No. 2.4e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 146; DB 5; L
Pred. No. 2.4e-12;
3; Mismatches 5;
                                                                                      144 VIFHYKGRNHMIKKDIRCKDDVFTHLYTLIVNSDN 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     321 AA
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                                                                 1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
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PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN. 1.
PROSITE; PS00804; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. 2; 1.
                                                                                                                                                                                            387 AA
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EMBL, AF052978; AAD03405.1; -.
InterPro; IPR001580; Calreticulin.
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J. Mol. Evol. 49:729-735(1999).
EMBL; AB025323; BAA88476.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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77.18;
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Matches 27; Conservative
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Litomosoides sigmodontis.
Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Litomosoides.
                                                                                                  Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
                                                                                                                                                                                                                                                                                                                                                       "Strong expression of the calreticulin gene in the liver of Rana rugosa Tadpoles.";
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Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL, AJ001621; CAAA0487.1; -.
FIGHT PRO0262; Calreticulin.
ProDom: PRO0262; Calreticulin. 1.
PRINTS; PRO0626; CALRETICULIN.
PROSITE: PS00803; CALRETICULIN. 1.
PROSITE: PS00804; CALRETICULIN. 2; 1.
PROSITE: PS00805; CALRETICULIN. 2; 1.
PROSITE: PS00805; CALRETICULIN. 2; 1.
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Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
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01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
RAL-1 PROTEIN (FRAGMENT).
                            1 FEB-1997 (TrEMBLrel. 02, Created)
1-FEB-1997 (TrEMBLrel. 02, Last sequence update)
1-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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80.0%; Pred. No. 1.4e-12;
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EMBL, 2001. 0:0-0(1996).
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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FEBS Lett. 387:27-32(1996).
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Gaps

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Search completed: January 9, 2002, 15:03:30 Job time: 272 sec

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WO200020577-A1.
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 Search time 83.2 Seconds (without alignments) 31.161 Million cell updates/sec
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Recombinant human
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AAB40855 AAY88565

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Swinepox virus Hin Protein encoded by Plasmodium falcipa C glutamicum prote Peptide Seg ID No:

AAY28509 AAG93016 AAY21879 AAY09101

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Fen(Y205D) mutant

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ALIGNMENTS

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AAY00925 AAB32385 AAG24609 AAG30998 AAG24608 AAG47932 AAG24608

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Calnexin sequence.

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AAG30997 AAG30996 AAR71094 AAY77953 AAB66342 AAG46612 AAG46611

MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic. Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth Recombinant human calreticulin residues 121-180. (USSH) US DEPT HEALTH & HUMAN SERVICES. AA. 9 AAY92354 standard; Protein; 99WO-US23240 98US-0103438 Ë Pike SE, WPI; 2000-303767/26 06-OCT-1998; Tosato G,

Human vasostatin (Recombinant delta-Recombinant human Calreticulin. Hom

60 kD Ro (Ro/SSA) Calreticulin. Hom Human MBP-calretic Recombinant human Flea calreticulin

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                                                         A novel method of inhibiting endothelial cell growth comprises

contecting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibitino of anadogenesis, tumor growth und/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with necvascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, necvascular glaucoma, psoriasis, angiofibromas, immune of trachoma, necvascularization, atheroscierosis, excessive wound repair, retinal necvascularization, macular aggeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rhounding systemic lupus errythromatchour, thyroiditis, Goodpasture's syndrome, systemic vasculatis, scleroderma, Sjorgen's syndrome, surcoidosis and primary biliary cirrhosis). The method may
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MBP-calreticulin; maltose binding protein; anglogenesis; inhibition; endothelial cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
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                  Claim 4; Page 85; 99pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kaposi's sarcoma (claimed).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200020577-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-APR-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tosuto G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY92352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HOMOH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inhibiting endothelial cell growth and anglogenesis using calreticulin, useful for suppressing tumor growth
           neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immunue inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, andiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection,
associated with a disease other than a tumor that is associated with
                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MBP-calreticulin; maltose binding protein; vasostatin; N-terminal; angiogenesis; inhibition; endothelial cell; anti-angiogenic; merroprotective; antidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antidiflammatory; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
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                                                                                                                                                                                                                                                                                                                                        Length 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human vasostatin (calreticulin N·terminal 180 amino acids).
                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                   Ouery Match 100.0%; Score 189; Best Local Similarity 100.0%; Pred. No. 1 Matches 35; Conservative 0; Mismatche
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY92351 standard; Protein; 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US23240
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Kaposi's sarcoma (claimed).

280 AA;

Sequence

SXXC

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This sequence comprises recombinant human calreticulin (AAY92350)
missing the N-terminal 120 amino acids.

A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of
majogenesis, tumor growth and/or endothelial cell growth (claimed). The
contacting the used for inhibiting angiogenesis in a patient. The
method may be used for inhibiting angiogenesis in a patient. The
cassociated with neovascularization (e.g. diabetic neuropathy, retrolental
fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas,
immune inflammation, atherosclerosis, excessive wound repair, retinal
neovascularization, degeneration, corneal graft rejection,
contact lens overwear, Crohn's disease, non-immune inflammation,
cheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
contact lens syndrome, systemic vasculitis, scleroderma, Sjorgen's
cyndrome, sarcoidosis and primary billiary cirrhosis). The method may
also be used for treating/inhibiting tumor growth especially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                             Gaps
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0
                                                                                                                                                                                        Length 180;
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                                                                                                                                                                                    ; DB 21;
4.9e-22;
hes 0;
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s; Pred. No. 4.96
0; Mismatches
                                                                                                                                                                                                                                                               1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Recombinant delta-120 calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                            AAY92355 standard; Protein; 280 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 4; Page 86; 99pp; English.
                                                                                                                                                                                      100.0%;
100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                  Ouery Match 100.
Best Local Similarity 100.
Matches 35; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-303767/26
                                                                                                                                180 AA;
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                                                                                                                                  Sequence
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Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY92349) without the 17 N-terminal amino acids.

A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythomatosus, thyroiditis, systemic upus erythomatosus, thyroiditis, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary billary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MBP-calreticulin; maltose binding protein; angiogenesis; inhibition;
                                                                      ö
Length 280;
                                                                      Indels
100.0%; Score 189; DB 21; 100.0%; Pred. No. 8.4e-22;
                                                                                                                                                                                  1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                 AA.
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                                                                                                                                                                                                                                                                                                                                                                                              AAY92350 standard; Protein; 400
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pike SE,
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                             Best Local Similarity
Matches 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200020577-A1
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   Query Match
                                                                                                                                                                                                                                                                                                                                                        AAY92350
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400 AA

Sequence

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Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                                                                                                                                                                                                                                                                                                     Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                              DNA sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen - used in immunoassays to detect rheumatic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 189; DB 10; ilarity 100.0%; Pred. No. 1.4e-21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            McCauliffe DP;
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                                                                                                                                                                                                                                                                                                                         Disclosure; Fig 2; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                417
                                                                                                                     89WO-US01213.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY00927 standard;
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les 35; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                            417 AA;
                                                                                                                                                                                                                                                   N-PSDB; AAP92276
                                                                                                                                                                                                         Sontheimer RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
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                                                                                                                     22-MAR-1989;
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                                                          WO8909273-A
                                                                                        05-OCT-1989
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                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                 antigens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is calreticulin. It and a C-domain derived peptide (AAM06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type roge, are administered either parenterally, intravenously or via a catherer and can target areas of vascular damage to inhibit or prevent restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibition of restenosis in patients - using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same activity.
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                  Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                             Indels
               Score 189; DB 21;
Pred. No. 1.3e-21;
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1larity 100.0%; Pred. No. 1.3e-21;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sjorens syndrome; systemic lupus erythematosus.
                                                                                                                                                                                                                                                                                           calreticulin; C-domain; restenosis; inhibitor.
100.0%; Scor.
100.0%; Pred. No. ...
0; Mismatches
                                                                                       129 viinykgknvlinkdirckddefthlytlivrpdn 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129 vifnykgknvlinkdirckddefthlytlivrpdn 163
                                                                         1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAP92276 standard; protein; 417
                                                                                                                                                                         AAW11156 standard; peptide; 401
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               Query Match
Best Local Similarity 100.
Matches 35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Michalak M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYAL-) UNIV ALBERTA.
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Matches 35; Conser
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                                                                                                                                                                                                                                                                Calreticulin
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17-MAY-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                   Kaposi's
                                                                                                                                                                                                                                                                                                                                                                AAY92353;
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Best Local 3
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                                             This sequence is calreticulin, a homologue of Clq and collectin receptor (cClqR). The invention relates to the use of a cClqR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cClqR binding domain in a medicament to inhibit cub functionality. The cClqR binding domain, or its inhibitor, can be used to freat a human or animal body. Particularly an inhibitor is used to complement activation involved in the initiation and maintenance of inflammation, for example in mycoardial infarction, brain ischaemia fstroke), gut ischaemia, rheumatoid arthritis, systemic lupus erythematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cClqR binding domain or inhibitor emables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                       MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antinilammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                        Gaps
of a cClqR binding domain - to modulate complement ubiquitin
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                                                                                                                                                                                                                                 Length 417;
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                                                                                                                                                                                                                                 Score 189; DB 20;
Pred. No. 1.4e-21;
                                                                                                                                                                                                                                                                                      1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                       Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label= mature_protein
                              Disclosure; Page 26-27; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 79-80; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                     AAY92349 standard; Protein; 417 AA
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                                                                                                                                                                              .ow molecular weight molecule.
                                                                                                                                                                                                                                100.0%;
100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                Query Match 100.
Best Local Similarity 100.
Matches 35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    Human MBP-calreticulin.
          (CUB) functionality.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000-303767/26
                                                                                                                                                                                                  417 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
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A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
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                                                                                                                                                                                                                         neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection,
                                                                                                                                                                                                                                                                                                                                                                              contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 189; DB 21; 100.0%; Pred. No. 1.4e-21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA.
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nes 35; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sarcoma
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neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriașis, angiofibromas, immmune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoldosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Macmatophagous insect calreticulin protein - used to reduce insect infestation and desensitise patients to allergic dermatitis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.6%; Score 175; DB 21; 100.0%; Pred. No. 1.7e-20;
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Best Local Similarity 100.0%; Pred. No. 1.7
Matches 32; Conservative 0; Mismatches
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N-PSDB; AAT39517.
                                                                                                                                                                                                                                                                                                                                                                                         49 AA;
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The sequence was deduced from a cDNA clone lambda RAL-1 prepd. from RNA isolated from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically bind to protein prepd. From induced cultures of lambda RAL-1 lysogens recognise a single polypeptide of mol. wt. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. wt. 39,130. If the antigen is not subject to post-translational processing this suggests that most of the coding sequence is present. The three repeats are highly hydrophilic regions likely to be exposed on the surface of the antigen and highly immunogenic. Recombinant antiguan expressed by the clone can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           volvulos antigen - used to express vaccine against onchocerciasis or river
                              ;
0
  Length 403;
                                                                                                                                                                                                                                                                   River blindness; onchocerciasis; vaccine; antigen; parasite.
                              Indels
                                                                                                                                                                                                                                         Partial sequence of Onchocera volvulus 42 kD antigen.
 Score 167; DB 17;
Pred. No. 4.1e-18;
                                                                      1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
              Pred. No. 4.16
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                               177..183
/label= repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                                                                                      195..201
/label= repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
160..166
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/note= "hydrophilic"
                                                                                                                                                        AA
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                                                                                                                                                      AAR12312 standard; Protein; 336
88.48;
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                                                                                                                                                                                                             (first entry)
                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA encoding Onchocerca recombinant antigen for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unnasch TR;
                                                                                                                                                                                                                                                                                              Onchocerca volvulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1991-185179/25
              Similarity
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                                                                                                                                                                                                             29-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JUN-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-JUN-1988;
 Query Match
Best Local Simmatches 29;
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(first entry)

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Rat cClqR binding domain protein sequence.
                                                                             AAY00926 standard; Protein; 122
1 rckddefthlytlivrpdn 19
                                                                                                                                          28-MAY-1999
                                                                                                            AAY00926;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence is a clq and collectin receptor (cclqR) binding domain. The invention relates to the use of a cclqR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cclqR binding domain in a medicament to inhibit CUB functionality. The cclqR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor is used to treat complement activation involved in the initiation and maintenance of inflammation, for example in myocardial infarction, brain ischaemia stroke), gut ischaemia, rheumatoid arthritis, systemic lupus erythematossus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cclqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                       Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Use of a cClqR binding domain - to modulate complement ubiquitin
                                                                             ;
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                                            Length 336;
                                                                             Indels
                                            Score 139; DB 12;
Pred. No. 9.2e-14;
}; Mismatches 6;
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Pred. No. 3.2e-09;
0; Mismatches 0;
                                                                                                                              Human cClqR binding domain protein sequence.
                                                                                                          1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                            3; Mismatches
                                                                                                                                                                                                                          AAY00924 standard; Protein; 122 AA
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                                            73.5%;
74.3%;
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                                                                                                                                                                                                                                                                                            (first entry)
                                        Query Match 13.3
Best Local Similarity 74.3
Matches 26; Conservative
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336
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                                                                                                                                                                                                                                                                                        28-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schwaeble W;
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Clg and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
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Pred. No. 3.2e-09;
0; Mismatches 0;
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100.08; Pro
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N-PSDB; AAX27253.
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                                                                                                                                                                                    Rattus norvegicus
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56.6%; Scilarity 100.0%; P

Query Match Best Local Similarity Matches 19; Conserv

RCKDDEFTHLYTLIVRPDN 35

17

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Length 122;

05-APR-2001 (first entry)

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The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the exprension of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells -
                                                                                                                                                                            Castor bean; calreticulin; calcium binding; er; endoplasmic reticulum; calnexin; promoter; resistance.
                                                                                        Castor bean calreticulin SEQ ID NO: 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PION") PIONEER HI-BRED INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Fig 3; 45pp; English.
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N-PSDB; AAF29741, AAF29742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Coughlan SJ, Winfrey RJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   415 AA;
                                                                                                                                                                                                                                                                                                               Ricinus communis
                                                                                                                                                                                                                                                                                                                                                                                                   US6171864-B1.
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Search completed: January 9, 2002, 15:01:14 Job time: 160 sec

2 IFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34

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Gaps ó

Query Match
55.6%; Score 105; DB 22; Length 415;
Best Local Similarity 51.5%; Pred. No. 3e-08;
Matches 17; Conservative 7; Mismatches 9; Indels

Perfect score:

Sequence:

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Run on:

Scoring table:

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992.7 990.6 990.6 990.6 70.0 776.0 7

8888877777988888 44477777798894 87881077777788888

Score

Result

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Query Match
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Matches 15; Conserv
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A SUBJUNCE FROM N.A.

A SUBJUNCE FROM N.A.

SUBJUNCE AND J.M., Just M.L., Lennarz W.J.;

"Cloning and Characterization of AlphaP Integrin and Calreticulin in Embryos of the Sea Urchin.",

"Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

I.S. Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

REMBL; AF177915; AAD55725.1;

RINTEFPO; IPRO00886; ER_Earget.

RINTEFPO; IPRO01580; Calreticulin.

R PRIMTS; PRO0262; Calreticulin. 1.

R PRIMTS; PRO0626; Calreticulin. 1.

R PRODEN; PRO08064; Calreticulin. 1.

R PROSITE; PS00805; CALRETICULIN. 2.

R PROSITE; PS00805; CALRETICULIN. 1.

R PROSITE; PS000805; CALRETICULIN. REPEAT; 3.

R PROSITE; PS00014; ER_TARGET; UNKNOWN.1.
                                                                                                                                                                                                         Strongylocentrotus purpuratus (Purple sea urchin).
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoideu; Eucchinoidea; Echinoidea; Strongylocentrotidae;
Strongylocentrotus.
NCBI.TaxID-7668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aplysia californica (California sea hare).
Eukaryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplysiidae; Aplysia.
NCBI_TaxID 6500;
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MEDLINE 93098937; PubMed 1463604;
Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;
"Long-term sensitization training in Aplysia leads to an increase in calreticulin, a major presynaptic calcium-binding protein.";
Neuron 9:1013-1024(1992).
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Pred. No. 1.6e-05;
1; Mismatches 1; Indels
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PRINTS: PR00625; calceticulin; 1.
Probom: P001686; calceticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00905; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; RE_TARETICULIN_1 SEQUENCE.
405 AA; 46738 MW; 14CAAZ01840D1D69 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 CALRETICULIN.
48822 MW; 172C664F59F41F93 CRC64;
                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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                             421 AA
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InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90.68;
                                                                           01-MAY-2000 (TrEMBLrel, 13, 01-MAY-2000 (TrEMBLrel, 13, 01-JUN-2001 (TrEMBLrel, 17, CALRETICULIN PRECURSOR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; S51239; AAB24569.1; -.
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Best Local Similarity 88.9
Matches 16; Conservative
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                             PRELIMINARY;
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                                                     089060
                                                                                                                                                                                         CALRET
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089060
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                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE~SALIVARY GLANDS;
Jaworski D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T.,
                                          .
0
                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
Parasitiformes; Ixodida; Ixodidae; Amblyomma.
NCBI_TaxID~6943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .;
0
Length 405;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
TISSUE-SALLYARY GLANDS;
Fain Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL, 007708; AAG79094.1.;
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jaworski D.C.;
Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32CCB8750A17DC54 CRC64;
                                                                                                                                                                                                                                                                           01-NOV-1996 (TrEMBLrel. 01, Created)
01-JAN-1999 (TrEMBLrel. 09, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                 2.1e-05;
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Pred. No. 3.1e-05;
Score 86; DB 5;
Pred. No. 2.1e-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          406 AA
                                                                                                                                                                                                                                         410 AA
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                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pfam; PF00262; calreticulin; 1.
PRONTS; PR00626; CALRETICULIN,
PRODOM; PD001866; CALRETICULIN, 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00803; CALRETICULIN REPEAT; 3.
PROSITE; PS00804; ER_TARGET; UNKNOWN 1.
SEQUENCE 410 AA; 47485 MW; 32CCB8750A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAY-2000 (TrEMBLrel. 13, Created) 01-MAY-2000 (TrEMBLrel. 13, Last sequel.JUN-2001 (TrEMBLrel. 17, Last ann CALFBTICULIN.
CRC OR CG9429.
Drosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Insect Physiol. 41:369-375(1995)
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                                                                                                                                                                                                                                         PRT;
89.6%;
83.3%;
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88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 49-410 FROM N.A.
                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               145 VIFNYKGKNHLINKEIRC 162
                                                                                   1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 VIFNYKGKNVLINKDIRC 18
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Best Local Similarity 88.99
Matches 16; Conservative
                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
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TISSUE-SALIVARY GLANDS;
                                                                                                                                                                                                                                                                                                                                                                                           Amblyomma americanum.
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us-09-828-000-6.rspt

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Gaps

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Indels

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Mismatches

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Conservative

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076961
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                         Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
MEDLINE-96234004; PubMed-8654561;
Yamamoto S., Nakamura M.;
"Calnexin: its molecular cloning and expression in the liver of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Strong expression of the calreticulin gene in the liver of rugosa Tadpoles.";
J. Exp. Zool. 0:0°0(1996).
EMBL; POSSE99; BAL1425.1;
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                      Dodo K., Sakoyama Y., Gamo S.;

Dodo K., Sakoyama Y., Gamo S.;

L Subnited (JAN-1997) to the EMBL/GenBank/DDBJ databases.

EMBL; AB000718; BaA85379-11; -.

R FlyBase; FBgn0005585; Crc.

InterPro; IPR001580; Calreticulin.

R InterPro; IPR001886; ER_Larget.

R Pfam; PF00262; calreticulin. 1.

R PRINTS; PR00626; Calreticulin. 1.

R PPTDODM; PD001866; Calreticulin. 1.

R PROSITE; PS00803; CALRETICULIN. 1.

R PROSITE; PS00804; CALRETICULIN. 2; 1.

R PROSITE; PS00805; CALRETICULIN. 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 79; DB 5; Length 406;
Pred. No. 0.00026;
2; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPRU01200; Calreticulin; 1.
Pranty: PR00626; Calreticulin; 1.
PRODOM: PD001866; Calreticulin; 1.
PROSITE: PS00803; CALRETICULIN. 1; 1.
PROSITE: PS00804; CALRETICULIN. 2; 1.
PROSITE: PS00805; CALRETICULIN. REPERT; 3.
PROSITE: PS0014; ER_TARGET; UNKNOWN 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82.3%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  098984;
01-FEB-1997 (TrEMBLrel. 02,
01-FEB-1997 (TrEMBLrel. 02,
01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146 VIFSYKGKNHLISKDIRC 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               frog, Rana rugosa.";
FEBS Lett. 387:27-32(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 82.3
Best Local Similarity 83.3
Matches 15; Conservative
                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                         STRAIN-OREGON-R;
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098984
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Length 419;

Score 78; DB 13; Pred. No. 0.00038;

81.2%; 88.2%;

Query Match Best Local Similarity

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                                                                                                                                                                                                                                                          Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                        Rubinstein A.L., Lee D., Luo R., Henton P.D., Halpern M.E.;
"Genes Dependent on Zebrafish cyclops Function Identified by AFLP
Differential Gene Expression Screen.";
Differential Gene Expression Screen.";
EMBL; AF195882; AAF13700.1; -.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P SEQUENCE FROM N.A.

P SEQUENCE FROM N.A.

Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood K.,

Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood K.,

Berry C., Fullkrug R., Beck E.;

"Calreticulin is a hookworm allergen.";

L Submitted (JUN 1998) to the EMBL/GenBank/DDBJ databases.

EMBL, AJ006790; CAA0724 1.;

R InterPro; IPR000886; ER_target.

R InterPro; IPR001580; calreticulin.

Pfam: PF00262; calreticulin; 1.

R PRINTS; PR00625; Calreticulin; 1.

Probom; PD001866; Calreticulin; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000C5B4004699B6 CRC64;
                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Last annotation update)
                                                                                                                                                  417 AA.
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PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_REPEAT; 3.
PROSITE; PS008014; ER_TARGET; UNKNOWN 1.
SEQUENCE 417 AA; 48723 MW; 2000C5B4004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN. ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1998 (TrEMBLrel. 08, 01-NOV-1998 (TrEMBLrel. 08, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 VIFNYKGKNVLINKDIRC 18
                        1 VIENYKGKNVLINKDIR 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14; Conservative
                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
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SEQUENCE FROM N.A.
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Gaps

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Indels

Length 375;

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A MacLennan K., Hoffman W.H., Taylor D.W.;
L Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ001621; CAA004877.1; -.
R InterPro; IPR001580; Calreticulin.
P Pfmr; PF00262; calreticulin; 1.
P PrinrS; PR00626; Calreticulin; 1.
R Probom; PD001866; Calreticulin; 1.
R PROSITE; PS00803; CALRETICULIN_1; 1.
R PROSITE; PS00804; CALRETICULIN_2; 1.
R PROSITE; PS00804; CALRETICULIN_2; 1.
R PROSITE; PS00805; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                          375 AA; 43842 MW; 03F7642FBFF7A5B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-1999 (TrEMBLrel. 10, Created)
1-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-UNN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                        76.0%; Score 73; DB 5; 72.2%; Pred. No. 0.002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  387 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 72.2
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 72.2
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
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387
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID-6287;
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                                                                                                                                                                                                                                                                                                                  NON_TER
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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Q91710
ID Q91710
AC Q91710;
DT 01-JAN:
DT 01-JAN:
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097372
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01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JAN-2001 (TrEMBLrel. 17, Last annotation update)
01-JUN-2001 (FREMBLY).
Litomosoides sigmodontis.
Litomosoides sigmodontis.
Chararyota; Mrtaxoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchorucidae; Litomosoides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETCULIN (FRAGMENT).
Xonopus laevis (African clawed frog).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Troves S., Zorzato F., Pozzan T.;
"Identification of calreticulin isoforms in the central nervous
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Pred. No. 0.0018;
1; Mismatches 3; Indels
                                                                                                                                                                                                                              Query Match

77.1%; Score 74; DB 5; Length 403;
Bust Local Similarity 82.4%; Pred. No. 0.0015;
Matches 14; Conservative 1; Mismatches 2; Indels
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                                                                                                                                16 POTENTIAL.
46833 MW; 21F38B0515487B6F CRC64;
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PROKAM; PD001866; CALRETICULIN; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 3.
PS00803; CALRETICULIN_1; 1.

PS00804; CALRETICULIN_2; 1.

PS00805; CALRETICULIN_REPEAT; 3.

PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
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EMBL, X67598, CAA47867.1; -.
InterPro; IPRO01580; Calreticulin.
Pfam: PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIJINE 93074997; PubMed :1445218;
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Hest Local Similarity 77.8
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xenopodinae; Xenopus.
NCBI_TaxID 8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      343 AA;
                                                                                                                                                      403 AA;
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                                                                                                        Signal; Allergen.
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NON_TER
SEQUENCE
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                             PROSITE;
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018478
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BABL, AR052978; AAD03405.1; -
InterPro; IPR00526; Calreticulin.
PRINTS; PR00626; CALRETICULIN.
Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchocercidae; Dirofilaria.
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Pred. No. 0.0021;
3; Mismatches 2; Indels
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E7741BF6AAFA5885 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                Probom; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
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75.0%; Score 72; DB 5; 77.8%; Pred. No. 0.003;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PSO0805; CALRETICULIN_REPEAT; 2. PROSITE; PSO0014; ER_TARGET; UNKNOWN 1. SEQUENCE 396 AA; 45813 MW; C57394C6FB4
                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                       PRT;
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MEDLINE-20063780; Pubmed=10594174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Mol. Evol. 49:729-735(1999).
EMBL, AB025323; BAA88476.1; -.
InterPro; IPRO00886; ER_target.
InterPro; IPRO01580; Calieticulin.
                      75.0%;
77.8%;
                                                                                                                                                                                                                                    01-JUN-1998 (TrEMBLrel. 06, 01-JUN-1998 (TrEMBLrel. 06, 01-JUN-2001 (TrEMBLrel. 17,
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                                                                                                       99 VIFNYKGQNHLIKKDIPC 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145 VIENYKGONHLIKKDIPC 162
                                                                                    1 VIFNYKGKNVLINKDIRC 18
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Matches 14; Conservative
                                                       Conservative
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                    Query Match
Best Local Similarity
Matches 14; Conserv
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                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=6182;
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                                                                                                                                                                                                                        045034;
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Q9U5G0
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 17, Last annotation update)
01-JUN-2001 (TrEMBLREL. 17, Last annotation update)
CALRETCOLLIN (FRAGMENT).
RAL-1.
RAL-1.
Schistosoma japonicum (Blood fluke).
Eukaryota; Metazoa: Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALMETICULIN PRECURSOR (FRAGMENT).
CALMETICULIN PRECURSOR (FRAGMENT).
Enopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                     Ireves S., Zorzato F., Pozzan T.;
"Identification of calreticulin isoforms in the central nervous
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Pred. No. 0.0022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Huggins M.C., Moloney N.A.;
Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; MBOS24; AAA29917.1;
InterPro; IPR001580; Calreticulin.
Pfam; PPR00562; Calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PROSTITE; PS00804; CALRETICULIN.
PROSTITE; PS00804; CALRETICULIN.1;
PROSTITE; PS00804; CALRETICULIN.2;
PROSTITE; PS00804; CALRETICULIN.3; 1.
PROSTITE; PS00805; CALRETICULIN.3; 1.
PROSTITE; PS00805; CALRETICULIN.3; 1.
PROSTITE; PS00804; CALRETICULIN.3; 1.
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891DA66E00EBBEFA CRC64;
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                                                                                                                                                                                                                                 Biochem. J. 287:579-581(1992).
EMBL: X67597; CAA47866.1; -
InterPro: IPR000886; ER_target.
InterPro: IPR001580; Calreticulin.
Pfam: PF00262; Calreticulin: I.
PRODIX: PR00626; Calreticulin: I.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN. I.
PROSITE; PS00804; CALRETICULIN. I: I.
PROSITE; PS00804; CALRETICULIN. I: I.
PROSITE; PS00184; ER_TARGET; UNKNOWN. I.
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77.8%;
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                                                                                 Xenopodinae; Xenopus
NCBI_TaxID=8355;
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SEQUENCE
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SIGNAL
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Eukaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
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                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eptatretus burgeri (Inshore hagfish).
Eukaryota, Metazoa; Chordata; Craniata; Hyperotreti; Myxiniformes;
Myxinidae; Eptatretinae; Eptatretus.
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                   Length 350;
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Score 72; DB 5; Lengta co. Pred. No. 0.0027;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scott J.C.;
Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF004408; AAC00515.1; -
InterPro; IPR000886; ER_target.
InterPro; IPR001380; Calreticulin.
Pfam; PF00525; calreticulin. 1.
PRINTS; PR00626; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN. 1.
PROSITE; PS00803; CALRETICULIN. 1.
PROSITE; PS00804; CALRETICULIN. 1.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
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                                         Query Match
Bust Local Similarity 61.1%; Prod. No. 0.18;
Matches 11; Conservative 3; Mismatches 4; Indels
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Search completed: January 9, 2002, 15:03:29 Job time: 271 sec

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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January 9, 2002, 15:12:15 ; Search time 25.18 Seconds (without alignments) 26.210 Million cell updates/sec US-09-828-000-6 96 1 VIFNYKGKNVLINKDIRC 18 Title: Perfect score: Sequence: Run on:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 seqs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

35	Description	P52193 bos taurus	P14211 mus musculu	ratt	P27797 homo sapien	oryct		P29413 drosophila		P11012 onchocerca	P27798 caenorhabdi	Q9std3 chlamydomon		~	beta vul		4	P13592 homo sapien	рошо	bos t		P13590 qallus qall	mus mus		arabić		xenopr		_	Q9sp22 zea mays (m	~	-	P34208 schizosacch	
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Query Match Best Local Similarity

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  Gaps
                                                                                                                                                                                                               SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN BALB/C; TISSUE-Liver;
MEDIINE 90059955; Pubmed-2583110;
Smith M.J., Koch G.L.E.,
"Multiple zones in the sequence of calreticulin (CRP55, calregulin, HMCHP), a major calcium binding ER/SR protein.";
EMBO J. 8:3581-3586(1989).
                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Matazou; Chordata; Craniata; Vertebrata; Buteleostoml;
Mammalla; Eutherla; Rodentía; Sciurognathl; Muridae; Murinae; Mus.
NCBL_TaxID:10090;
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                                                                                                             01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
15-DRC:1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
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InterPro: IPR001580; Calreticulin.
InterPro: IPR001580; Calreticulin.
InterPro: PR00266; Calreticulin; I.
PRINTS; PR00266; Calreticulin; I.
PRODAM; PS001866; Caleticulin; I.
PROSITE; PS00803; CALRETICULIN.]; I.
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Endopludmic reticulum; Calcium-binding; Repeat; Signal.
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SWISS-2DPAGE; P14211; MOUSE.
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                               129 VIFNYKGKNVLINKDIRC 146
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Conservative
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"An endoplasmalc reticulum protein, calreticulin, is transported into Exp. Cell Res. 205:101-110(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P18418; P10452;
01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (CALBP)
(CALCIUM-BINDING PROTEIN 3) (CABP3).
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MURDLIME-03704069; PubMed-2395661;
Murthy K., Banville D., Srikant C.B., Carrier F., Bell A.,
Holmes C., Patel Y.C.;
Structural homology between the rat calreticulin gene product and
the Orchocerca volvulus antigen Ral-1.";
Nucleic Acids Res. 18:4933-4933(1990).
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Pred. No. 1.4e-07;
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24C03B00913408D8 CRC64;
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                                                                                                                                                                                                                                                                                 "Identification of protein disulfide isomerase and calreticulin as autofimume antiques in LEC strain of rate.";
Blochim. Blophys. Acta 1158:339-344(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM BINDING STITES.
-!- SUBGRILLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SUBGRILLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALREFICULIN FAMILY.
-!- CAUTION: WAS ORIGINALLY (REF. 2) THOUGHT TO BE D-BETA-
HYDROXYBUTYRATE DEHYDROGENASE.
                                         MEDLINE-9105414; PubMed-2241926; Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M., Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M., Maldonlesi J., Pozzan T.; "Calreticulin is a candidate for a calsequestrin-like function in Ca2(+)-storage compartments (calciosomes) of liver and brain.";
                                                                                                                                                                                                                                  MEDLINE-94072621; PubMed=8251535;
Yokoi T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi R.,
Kamataki T.;
                                                                                                                                                   MEDLINE-92360010; PubMed-1497655;
Nakamura M., Michikawa Y., Baba T., Okinaga S., Arai K.;
"Calreticulin is present in the acrosome of spermatids of rat
Lone Y.C., Bailly A., Latruffe N.; Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Calcium-binding; Repeat; Signal.
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P-DOMAIN.
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4 X APPROXIMATE REPEATS.
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PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN; 1.
PROSITE; PS000014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
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PIR; S11205; S11205.
PIR; S112045; S13045.
PIR; A49176; A49176.
PIR; S45036; S45036.
PIR; J40819; J40819.
INTER-PRO: IPR001580; Calreticulin.
Inter-Pro: IPR000886; ER_target.
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X13702; CAA31987.1; ALT_SEQ.
X79327; CAA55890.1; -.
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McCauliffe D.P., Lux F.A., Lieu T.S., Sanz I., Hanke J., Newkirk M.M.,
Bachinski L.L., Itoh Y., Siciliano M.J., Reichlin M., Sontheimer R.D.,
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MEDLINE=92002034; PubMed=1911778;
Rojiani M.V., Finlay B.B., Gray V., Dedhar S.;
In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (calreticulin) with a highly conserved amino acid sequence in the cytoplasmic domain of integrin alpha subunits.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=92129342; PubMed=1733953; McCaullife D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; mcCaullife D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; The S'-flanking region of the human calreticulin gene shares homology with the human GRP78, GRP94, and protein disulfide isomerase
                                                                                                                                                                                                                                                                                                                                           Gaps
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01-AUG-1992 (Rel. 23, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (52 KDA RIBONUCLEOPROTEIN AUTOANTIGEN RO/SS-A).
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Rokeach L.A., Haselby J.A., Meilof J.F., Smeenk R.J., Unnasch T.R., Greene B.M., Hoch S.O.;
"Characterization of the autoantigen calreticulin.";
J. Immunol. 147:3031-3039(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Capra J.D.; "Molecular cloning, expression, and chromosome 19 localization of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo Sapiens (Human),
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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MEDLINE-90380058; PubMed-2400400;
Krause K.H., Simmerman H.K.B., Jones L.R., Campbell K.P.;
                                                                                                                         ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
2E6713CED31A2970 CRC64;
3 X APPROXIMATE REPEATS. 2-1.
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J. Clin. Invest. 85:1379-1391(1990).
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                                                                                                                                                                                                         47995 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence similarity of calreticulin with a Ca2(+)-binding protein that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store in HL-60
                                                                                                                                                                                                                                                                                                                                                                                          "Microsequences of 145 proteins recorded in the two-dimensional gel protein database of normal human epidermal keratinocytes."; Electrophoresis 13:960-969(1992).
                                                                                                                                                      Hochstrasser D.F., Frutiger S., Paquet N., Balroch A., Ravier F., Pasquall C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas R., Appel R.D., Hughes G.J.;

Appel R.D., Hughes G.J.;

#Human liver protein map: a reference database established by microssiquencing and gel comparison.";

Electrophoresis 13:992-1001(1992).
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Vandekerckhove J.;
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InterPro; IPR000866; ER_target.
Pitam; PF00262; Calreticulin; 1.
PRONTS; PR000865; Calreticulin; 1.
PROSITE; PS00014; ER_TRRGET; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS008064; CALRETICULIN_2; 1.
PROSITE; PS008065; CALRETICULIN_2; 1.
PROSITE; PS008065; CALRETICULIN_REPEAT; 3.
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P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
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MEDLINE-93162043; Pubmed 1286667;
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MEDLINE 97295306; PubMed 9150948;
                                                                                                                                    MEDLINE-93162045; PubMed 1286669;
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PIR, A37047, A37047.
PIR, S11475, S11475.
PIR, A42330, A42230.
PIR, A46422, A46452.
ASWISS-2DPAGE, P27797, HUMAN.
Aurhus/Ghent-2DPAGE, 9401; IEF.
                                                      Biochem. J. 270:545-548(1990)
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MEDLINE-91201375; PubMed-2016321;
MILDER R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L.,
Vance J.E., Opas M., Michalak M.;
"Calreticulin, and not calsequestrin, is the major calcium binding
protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic
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TISSUB-SIOW-LAUTCH skeletal muscle;
TISSUB-SIOW-LAUTCH bubMed-2600080;
Filegel L., Burns K., Maclennan D.H., Reithmeier R.A.F., Michalak M.;
"Modecular cloning of the high affinity calcium-binding protein
(Calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Biol. Chem. 264:21522-21528(1989).
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SEQUENCE OF 18-36.
MEDLINE-91054414; PubMed=2241926;
MEDLINE-91054414; PubMed=2241926;
Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
"Calreticulin is a candidate for a calsequestrin-like function in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertabrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
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TISSUB-FRAST-twitch skeletal muscle;
#MEDLINE*91282795; PubMed*2059224;
Fliegel L., Michalak M.;
"Fast-twitch and slow-twitch skeletal muscles express the same
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CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                                                                                                                                                                                                                                          100.0%; Score 96; DB 1; Length 417; 100.0%; Pred. No. 1.4e-07;
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1-2.
1-3.
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3 x approximate repeats.
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MEDLINE-92002038; PubMed=1911780;
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417 AA;
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Guan S., Falick A.M., Williams D.E., Cashman J.R.; "Evidence for complex formation between rabbit lung flavin-containing monooxygenase and calreticulin.";
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                                                         Biochemistry 30:9892-9900(1991).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBUNIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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B6082B689DC763A6 CRC64;
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PROSITE; PS00804; CALRETICULIN.2; 1.
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InterPro; IPR00886; ER.target.
Prem; PF00262; Calreticulin; 1.
PRIMTS; PR00626; CALRETICULIN.
ProDom; PD001666; Calreticulin; 1.
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PIR; C33208; C33208.
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PIR; F32308; F32208.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
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       RRATH AND DESCRIPTION OF THE FETTING TO SET THE SET THE FETTING THE SET THE SE
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15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                               Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                              Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBMIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                              Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
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Pred. No. 1.4e-07;
Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CALRETICULIN, BRAIN ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C-DOMAIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 X APPROXIMATE REPEATS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULLI. 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                               TISSUE-Brain;
MEDLINE-93385184; Pubmed-8373827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
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100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; L13462; AAC37307.1; -
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Best Local Similarity 100.
Matches 18; Conservative
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4211
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                                                                                            Mammalia; Eutheria; Ce
Bovidae; Bovinae; Bos
                                            Bos taurus (Bovine)
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                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                     Bovidae; Bovinae
NCBI_TaxID=9913;
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CRTC_SCHMA
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KACHAN BERKELEY

KACHAN BERKEL
                                                                                                        Drokophila melanogaster (Fruit fly).
Eukaryota, Metezzoa, Arthropoda, Tracheata, Hexapoda, Insecta,
Priryqota, Neoptera; Endopterygota, Diptera; Brachycera; Muscomorpha;
Ephydroideu; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercal RAL-1 antigen and an aplysia 'memory molecule''.

1. Cilin. Invest. 86:332-335(1990).

1. FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LAW APPINITY CALCIUM. BINDING SITES.

1. SUMCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

1. SUMCELLULAR LOCATION: ENDOPLASMIC RETICULUM FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE 90307981; PubMed 2365822;
McGauliffe D.P., Zappi E., Lieu T.S., Michalak M., Sontheimer R.D.,
                                                                                                                                                                                                                                                       Smith M.J.;
"Nucleotide sequence of a Drosophila melanogaster gene encoding
calreticulin homologue.";
         01-ARR-1993 (Rel. 25, Created)
01-CCT-1993 (Rel. 27, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                        MEDIINE 93208374; PubMed 1296819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 91-124 AND 182-220
                                                                                                                                                                                                                                                                                                                 Seq. 3:247-250(1992).
                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                    SPOUENCE FROM N.A.
                                                                                                                                                                                NCBI_TaxID 7227;
                                                                                                                                                                                                                                                                                                                                                                         STRAIN BERKELEY;
                                                                                       CKC OR CG9429.
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G06814; Q26562;

O1-JUN-1994 (Rel. 29, Created)
O1-FEB-1996 (Rel. 33, Last sequence update)
O1-FEB-1996 (Rel. 35, Last annotation update)
O1-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (SM4 PROTEIN).
Schistosoma mansoni (Blood fluke).
Eukaryota; Mctazoa; Platyhelminthes; Turbellarian Platyhelminths; Rhabditophora; Eulecihophora; Revertospermata; Mediofusata;
Neodermata; Trematoda; Digenea; Strigeidida; Schistosomatoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mol. Biochem. Parasitol. 62:313-315(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCTUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCTUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
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Khalife J., Pierce R.J., Godin C., Capron A.;
"Cloning and sequencing of the gene encoding Schistosoma mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Capron A.;
Koloning of the gene encoding a Schistosoma mansoni antigen
homologous to human Ro/SS-A autoantigen.";
Mol. Blochem. Parasitol. 57:193-202(1993).
                                                                                                                                                                                                                                                                                                                           EMBL; AC00368; AAF54416.1; --
PIR; A37158; A37158.
PIR; B49Base; RB40005885; Crc.
InterPro; IPR0000886; ER_target.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
PROJOE; PS00014; ER_TARGET; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN. 1.
PROSITE; PS00803; CALRETICULIN. 2.
PROSITE; PS00805; CALRETICULIN. 2.
PS00805; CALRETICUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 406;
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V -> L (IN REF. 3).
65D72C69D0BEC427 CRC64;
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Pred. No. 5.6e-05;
2; Mismatches 1;
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STRAIN-PUERTO RICAN;
MEDLINE=93165070; Pubmed-8433712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schistosomatidae; Schistosoma.
NCBI_TaxID-6183;
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83.3%;
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|146 VIFSYKGKNHLISKDIRC 163
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                                                                                                                                                                                                                                                                                                    EMBL; X64461; CAA45791.1;
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STRAIN-PUERTO RICAN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              406 AA;
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Best Local Similarity
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Mol. Biochem. P
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Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
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253
253
2267
281
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388
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                  135
388 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
ses 12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-BRISTOL N2;
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                             PROSITE; PS00805;
                                                                                                                                                                                                                                                        Calcium-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                          189
189
208
225
242
257
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REPEAT
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                                                                                                                       InterPro; IPR001580; Calreticulin.
InterPro; IPR001686; ER_target.
InterPro; IPR000866; ER_target.
InterPro; IPR000866; Calreticulin; 1.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS000014; ER_TARGET; 1.
PROSITE; PS0000014; ER_TRAGET; 1.
PROSITE; PS000805; CALRETICULIN_2; 1.
PROSITE; PS000805; CALRETICULIN_2; 1.
PROSITE; PS000805; CALRETICULIN_REPEAT; 1.
Endoplasmic reticulum; Calcium_binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rokeach L.A., Zimmerman P.A., Unnasch T.R.;
"Epitopes of the Onchocerca volvulus RAL1 antigen, a member of the calreticulin family of proteins, recognized by sera from patients with onchocerciasis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Onchocerca volvulus.
Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC. . .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                             3 X 11 AA APPROXIMATE REPEATS 2-1.
                                                                                                                                                                                                                                             4 X 12 AA APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                       Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                Score 72; DB 1; Length 353
Pred. No. 0.00065;
                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY.
PREVENT SECRETION FROM ER.
                                                                                                                                                                                                                                                                                                                                                                                  -> D (IN REF. 2).
 SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                             MV -> IL (IN REF. 2).
MISSING (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUL-1989 (Rel. 11, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-ROT-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                     CALRETICULIN
                                                                                                                                                                                                                          POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE-94341871; PubMed-7520419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Infect. Immun. 62:3696-3704(1994)
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Έ
                                                                                             EMBL; M93097; AAA29854.1; -. EMBL; L24159; AAA19024.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                        75.0%;
77.8%;
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                                                                                                                                                                                                                                                                                                                                                                                            45397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Onchocercidae; Onchocerca.
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 75.0
Best Local Similarity 77.8
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                      267
281
295
27
161
393
90
                                                                                                                 HSSP; P00268; 4RXN.
                                                                                                                                                                                                                                                                                                                                                                                           393 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=6282;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RAL1_ONCVO
P11012;
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[2] SEQUENCE OF 53-388 FROM N.A. SEQUENCE OF 53-388 FROM N.A. MEDLINE-88273584; PubMed-2455736; Dinasch T.R., Gallin M.Y., Soboslay P.T., Erttmann K.D., Greene B.M.; Unnasch T.R., Gallin M.Y., Soboslay P.T., Erttmann K.D., Greene B.M.; "Isolation and characterization of expression cDNA clones encoding antigens of Onchocerca volvulus infective larvae."; J. Clin. Invest. 82:262-269(1988).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 388;
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9537F298A2D31CD6 CRC64;
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4 X APPROXIMATE REPEATS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ARG/LYS-RICH (BASIC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 66; DB 1;
Pred. No. 0.0054;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALRETICULIN_REPEAT; 3.
Repeat; Antigen; Signal.
17 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProDom; PD001866; Calreticulin; 1. PROSITE; PS00803; CALRETICULIN_1; 1. PROSITE; PS00804; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M20565; AA59056.1; -.
PIR; A32507; A22507.
InterPro: PR001580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
PRINTS: PR00626; CALRETICULIN.
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1-2.
1-3.
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66.7%;
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|144 VIFHYKDRNHMIKKDIRC 161
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5-DEC-1998
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                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chlumydomonas rainhardtii.
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        reinhardtii calreticulin.";
Submitted (GCT-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
35CA7D2EC1D56B03 CRC64;
                            LOW AFFINITY CALCIUM-BINDING SITES.
SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 X APPROXIMATE REPEATS
                                                                                     -1 - SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALMETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chlamydomonadaceae; Chlamydomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfum; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45616 MW;
                                                                                                                                                                                                                                                                                                                                                                  EMBL; X59589; CAA42159.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         141 VILNYKGENKLIKKEITC 158
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 66.7
Ms 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      392
395 AA;
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Q9STD3;
20-AUG-2001
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CRTC_CHLRE
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Matches
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-:- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFILITY CALCIUM-BINDING SITES (BY SIMILARITY).
-:- SUBCELLULAR LOCATION: ENDOPLASHIC RELICULUM LUMEN (BY SIMILARITY).
-:- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CALRETICULIN.
PREVENT SECRETION FROM ER (POTENTIAL).
DD3BA3AFFBF61C9B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mueller-Taubenberger A., Gerisch G.;
Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
--- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW APFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
---- SUBCELLULMR LOCATION: ENDOPLASMIC RETICULIM LUMEN.
---- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dictyostellum discoideum (Slime mold).
Eukaryota, Mycetozoa, Dictyostellida; Dictyostellum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 61; DB 1;
Pred. No. 0.034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Rel. 37, Created)
(Rel. 37, Last sequence update)
(Rel. 37, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Interpro; IPR001580; Calrettculin.
Interpro; IPR000886; ER_target.
Pfam, PF00262; calretlculin; 1.
PRINTS; PR00626; Calretlculin.
ProDom; PD001866; Calretlculin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL
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InterPro; IPR001580; Calreticulin.
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Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AJ000765; CAB54526.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           417 420 P
420 AA; 47327 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match
Best Local Similarity 70.6'
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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SIGNAL
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CRTC_BETVU
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                                                                                                                                                                                                                                                ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
Navazio L., Baldan B., Martin W., Mariani P.;
Evidence for conservation of a calcium homeostat component:
purlification characterization and cloning of calreticulin from Euglena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                 PREVENT SECRETION FROM ER (POTENTIAL).
BAF273694FB6FC37 CRC64;
                                                                                                                                                                                                                                                ;
0
                                                                               X 12 AA APPROXIMATE REPEATS
                                                                                                                                 X 11 AA APPROXIMATE REPEATS
                                             1; Length 424;
                                                                                                                                                                                                                                                3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gracilis.";
Submitted (DEC-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PSO0804; CALRETICULIN_2; 1.
PROSITE; PSO0805; CALRETICULIN_REPEAT; FALSE_NEG.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                        Euglena gracilis.
Eukaryota; Euglenozoa; Euglenida; Euglenales; Euglena.
NCBI_TaxID=3039;
                                                                                                                                                                                                                                                                                                                                                                         (Rel. 40, Last sequence update)
                                                                                                                                                                                                                            DB 1;
0.07;
                                                                                                                                                                                                                                                                                                                                            401 AA
                                                                                                                                                                                                                                                Mismatches
        ProDom; PD001866; Calreticulin; 1.
PROSITE: PS00804; CALRETICULIN_2; 1.
PROSITE: PS00805; CALRETICULIN_REPEAT; 1.
PROSITE; PS00014; ER_TARGET; 1.
                                                                                                                                                                                                                            Score 59;
Pred. No. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PRO0626; CALRETICULIN.
PRODOM; PRO101866; CALRETICULIN; 1.
PROSITE: PS00014; ER_TARGET: 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; Y09816; CAA70945.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                               20-AUG-2001 (Rel. 40, Created)
CALRETICULIN.
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WW
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75.0%;
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                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                              CALRETICULIN PRECURSOR.
                                                                                                                                                                                           424 AA;
                                                                                                                                                                                                                                     Local Similarity tes 12; Conserv
PR00626;
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20-AUG-2001
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Q9ZNY3;
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                                                                                                                                                                                            SEQUENCE
PRINTS;
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between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFILITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS0014; ER_TARGET; 1.
PROSITE; PS008014; ER_TARGET: 1.
PROSITE; PS00803; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. 2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                          Gaps
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N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
                    CALRETICULIN.
PREVENT SECRETION FROM ER (POTENTIAL).
056B074C16292674 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Beta vulgaris (Sugar beet).

Bukaryota: Viridiplantae: Streptophyta; Embryophyta: Tracheophyta;

Bukaryota: Magnoliophyta; endicotyledons; core eudicots;

Caryophyllidae; Caryophyllales; Chenopodiaceae; Beta.

NCBL_TaxID-3555;
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                                                                                                                            Length 401
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565FEC3489F77CA7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Nucleotide sequence from sugar beet calreticulin.";
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Pred. No. 0.58;
                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                        (Rel. 40, Last sequence update) (Rel. 40, Last annotation update)
                                                                                                                                                 0.56;
                                                                                                                                                                                                                                                                                                                                                                            416 AA
                                                                                                                                                                            Mismatches
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                                                                                                                                 Score 53;
Pred. No.
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InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AJ002057; CAA05161.1; -. Mendel; 32549, Betvu;1166;32549.
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48136 MW;
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PRINTS; PR00626; CALRETICULIN.
                                                                     M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. STRAIN=VV-D/ZR5; TISSUE=Leaf;
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58.8%;
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401
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45910 N
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                                                                                                                                                                                                                      2 IFNYKGKNVLINKDIRC 18
                                                                                                                                                                          10; Conservative
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                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALRETICULIN PRECURSOR.
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416
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157
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Best Local Similarity
Matches 10; Conserv
                                                                                                                                 Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                       CRTC_BETVU 081919;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viereck R.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arabidopsis thallana (Mouse-ear cress),
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudlcotyledons; core eudlcots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shinn P., Brooks S., Buehler E., Chao Q., Johnson-Hopson C., Khan S., Kin C., Altafi H., Bel Q., Chin C., Chlou J., Chio E., Conn L., Conway A., Gonzales A., Hansen N., Howing B., Koo T., Lam B., Lee J., Lenz C., Li J., Liu A., Liu K., Liu S., Mukharsky N., Nguyen M., Palm C., Pham P., Sakano H., Schwartz J., Southwick A., Thaveri A., Ecker J.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; ACOOSSY: ARAZ29021; ALT_SEQ.
Mondel; 1650; Arath; 1166;16507.
InterPro; IPROUSSO; Calreticulin.
InterPro; IPROUSSO; Calreticulin.
InterPro; IPROUSSO; Calreticulin.
PRINTS; PROOSS; Calreticulin; 1.
PRINTS; PROOSSO; Calreticulin; 1.
PROSITE; PSOOBO3; Calreticulin; 1.
PROSITE; PSOOBO3; Calreticulin; 1.
PROSITE; PSOOBO3; CalreTICULIN_1; 1.
PROSITE; PSOOBO4; CALRETICULIN_2; 1.
PROSITE; PSOOBO4; CALRETICULIN_2; 1.
PROSITE; PSOOBO5; CALRETICULIN_2; 1.
PROSITE; PSOOBO5; CALRETICULIN_REPBAT; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALRETICULIN 3.
N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nelson D.E., Glaunsinger B., Bohnert H.J.;
Abbudaht accumulation of the calcium-binding molecular chaperone
calreticulin in specific floral tissues of Arabidopsis thaliana.";
Plant Physiol. 114:29-37(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -> S (IN REF. 2).
650E0AE8342F0B97 CRC64;
                                                                                                                                                         CKT3_ARATH STANDARD; PRT; 424 AA. 004153; QSSJE7; CCCated) 20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CKT3 OR T27G7.13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE:97303616; PubMed::9159940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49904 MW;
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153 IFNYNDTNHLIKKDVPC 169
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424
97
279
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54.2%; Score 52; DB 1; Length 424; larity 50.0%; Pred. No. 0.84; Conservative 5; Mismatches 4; Indels

Query Match Best Local Similarity Matches 9; Conserv

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Qy 1 VIENYKGKNVLINKDIRC 18
|| :|:|:| | ||::|
| Db 155 VIVSYQGQNYPIKKDLQC 172
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Search completed: January 9, 2002, 15:12:15 Job time: 657 sec

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calreticulin, brai
calreticulin precu
calreticulin autoa
41K larval antigen
calreticulin precu
                                                                                                                                          January 9, 2002, 15:02:03 ; Search time 43.73 Seconds (without alignments) 31.355 Million cell updates/sec
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glyceraldehyde-3-p
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   calreticulin -
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A64380 S58170 S58170 S33597 G71141 F710172 S23580 B82918 B84580 B84580 B86272 A60998 H71260	ALI ine cat ine cat ine base sho	reti 10-s 7498
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44448888888888888888888888888888888888	SULT 1 3376 Irettculin, brain iso Species: Bos primiqen Date: 20-oct-1994 #se Accession: S43376; S3 Matsuoka, K.; Seta, K Ochem. J. 298, 435-44 Title: Covalent struc Reference number: S43 Molecule type: protei Residues: 1-400 cAMT Experimental source: Liu, N.; Fine, R.E.; Ochlm. Biophys. Acta Title: Comparison of Reference number: S36 Accession: S36801 Reference number: S36 Accession: S36801 Reference number: S36 Accession: S36801 Reference number: S36 Accession: S4563, E.; Gratus: nucleic acid Molecule type: mRNA Residues: 45-63, E.; Gratus: nucleic acid Molecule type: mRNA Residues: 45-63, E.; Gratus: nucleic acid Molecule type: mRNA Residues: 45-63, E.; Reyperimental source: Superfamily: calretic Keywords: calcium bin 397-400/Region: endop 120-146/Disulfide bon 162/Binding site: car IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ulin prate nams: Mus ion: SO Multip nce num nce num ion: SO multip nce num ion: SO le type
8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	RESULT S43376 Calreticulin, brain i Calreticulin, brain i Cispecies: Bos primis Accession: S4376 A; Mile: Covalent str A; Reference number: SA; Accession: S43376 A; Molecule type: prot A; Reference number: SA; Ed.Lu, N.; Fine, R.E. Biochim. Biophys. Act A; Et.Lu, N.; Fine, R.E. Biochim. Biophys. Act A; Reference number: SA; Covalent source C; Superfamental source C; Superfamental source C; Superfamily: calret C; Kywords: calculum E; 1307-400/Region: enc E; 120-146/Disulfide P F; 162/Binding site: Cons Qy 1 VIFNYKGKNVI Db 129 VIFNYKGKNVI	RESULT 2 S06763 calreticulin precursor - mouse N;Alternate names: 55K calcium-binding C;Species: Mus musculus (house mouse) C;Date: 10-Sep-1999 #sequence_revision C;Accession: S06763; JC1444; PC1233; A5 R;Smith, M.J.; Koch, G.L.E. EMBO J. 8, 3581-3586, 1989 A;Title: Multiple zones in the sequence A;Reference number: S06763; MUID:900599 A;Accession: S06763 A;Molecule type: DNA

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A; Molecule type: mRNA
A; Residues: 'R',270-358,'AAG' <LON>
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A; Residues: 'R',270-358,'AAG' <LON>
A; Residues: 'R',270-358,'AAG' <LON>
A; Coss-references: EMBL:X13702; NID:956055; PIDN:CAA31987.1; PID:9930260
A; Note: the authors designated the protein as D-beta-hydroxybutyrate dehydrogenase
R; Yokol, T.; Naqayama, S.; Kajiwara, R.; Kawaguchi, Y.; Horiuchi, R.; Kamataki, T.
Biochim. Biophys. Acta 1158, 339-344, 1993
A; Title: Identification of protein disulfide isomerase and calreticulin as autoimmune
A; Reference number: S39371; MUID:94072621
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A; Residues: 18-36 < VAN>
R; Treves, S.; de Mattel, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M
Biochem. J. 277, 473-480, 1990
A; Title: Calrettoulin is a candidate for a calsequestrin-like function in Ca(2+)-stor
A; Reference number: S13045; MUID: 91054414
     AjExperimental source: testis, strain Sprague-Dawley
R;Soennichsen, B.; Fuellekrug, J.; van Nguyen, P.; Diekmann, W.; Robinson, D.G.; Mies
submitted to the FMBL Data Library, May 1994
A;Description: Retention and retrieval: both mechanisms cooperate to maintain calreti
A;Reference number: $45036
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A.Residues: 18-23, 'X',25-32 <YOK>
R; Residues: 18-23, 'X',25-32 <YOK>
R; Van, P.N.; Peter, F.; Soelling, H.D.
Biol. Chem. 264, 17494-17501, 1989
A; Title: Four intracisternal calcium-binding glycoproteins from rat liver microsomes itive calcium sequestering rat liver vesicles.
A; Reference number: A34473; MUID: 90008920
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                                                                                                                                                                                                                                                                                                            A Status: preliminary
A Molecule type: mnNA
A Molecule type: mnNA
A Residues: 1-416 <SOE>
A Cross-references: EMBL: X79327; NID:q488840; PIDN:CAA55890.1; PID:g488841
R Lone, Y C., Ballly, A .; Latruffe, N.
Submitted to the EMBL Data Library, December 1988
A; Reference number: S04867
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C;Superfamily: calreticulin
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F;1-17/Domain: signal sequence #status predicted <SIG>F;18-416/Perduct: calreticulin #status experimental <MAT>F;204-212/Region: nuclear location signal
F;13-416/Region: endoplasmic reticulum retention signal
F;13-44/Binding site: carbohydrate (Asn) (covalent) #status predicted
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llarity 100.0%; Pred. No. 1.5e-07;
Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 VIFNYKGKNVLINKDIRC 18
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   preliminary
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                                                                                                                                                                                                                                                                       A; Accession: S45036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: S04867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: S39372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: A34473
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C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Species: 10-160; Bagousone_revision 20-4mg-1994 #text_change 20-Jun-2000
C; Accession: J40619; A49176; S11205; PC1109; S45036; S04867; S39372; A34473; S13045
R; Nakamura, M.; Moriya, M.; Baba, T.; Michikawa, Y.; Yamanobe, T.; Arai, K.; Okinaga, S. Rxp. Cell Res. 205, J01-110, 1993
A; Title: An endoplusmic reticulum protein, calreticulin, is transported into the acrosom A; Reference number: A49176; MUD:93202172
A; Molecule type: mRNA
A; Westidues: 1-416 cNAK>
A; Cross-references: GB:D78308; NID:g1089798; PIDN:BAA11345.1; PID:g1845572
A; Reticus: prediminary
A; Wolecule type: mRNA; protein
A; Retidues: 1-416 cNAX>
A; Wolecule type: mRNA; Protein
A; Retidues: 1-416 cNAX>
A; Retidues: 1-416 cNAX>
A; Retidues: 1-416 cNAX>
A; Retidues: Reticus protein
A; Retidues: I - 416 cNAX>
A; Retidues: Reticus protein
A; Retidues: Reticus protein
A; Reticus prediminary
A; Wolecule type: MNA; Protein
A; Reticus prediminary
A; Wolecule type: Reticus protein
                                                                                                                                                                                                                             A) Accession: JC1444
A; Molecule type: mRNA
A; Residues: 1-416 < MAZ>
A; CONSTRUCTORS: GB: M92988; NID: g193084; PIDN: AAA37569.1; PID: g193085
A; Accession: DC1233
A; Molecule type: protein
A; Till: Chm. 270, 15926-15929, 1995
A; Molecule type: protein
A; Residues: 74-80; 142-151; 186-193 < WHI>C; Superfamily: calreticulin
C; Superfamily: calculum infinding
C; Superfamily: signal sequence **status predicted <SIG>F; 18-416/Peroduct: calregulin **status experimental <MAT>F; 18-416/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A.Experimental source: Sprague-Dawley, spermatagenic cells
A.Note: sequence extracted from NCBI backbone (NCBIN:127639, NCBIP:127643)
A.Note: sequence extracted from NCBI backbone (NCBIN:127639, NCBIP:127643)
A.Note: sequence extracted from NCBI backbone (NCBIN:127639, NCBIP:127643)
A.Expercence of Structural homology between the rat calreticulin gene product and the Onchocerc A.Expercence numbor: S11205
A.Expercence numbor: S11205
A.Expercence of S11205

                                                                                                                                                   A;Title: Determination of the sequence of an expressible cDNA clone encoding ERp60/calre
A;Reference number: JC1444; MUID:93013037
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A;Cross-references: EMBL:X14926; NID:950567; PIDN:CAA33053.1; PID:950568 R;Mazzarella, R.A.; Gold, P.; Cunningham, M.; Green, M. Green, M.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein
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Matches 18; Conserv
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Gaps

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A. Accession: A34154
A. Status: preliminary
A. Molecule type: mRNA
A. Molecule type: protein
A. Molecule type: protein
A. Molecule type: protein
A. Mesidues: 19-32 cTRE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Additional precursor, skeletal muscle - rabbit

C. Species: Oryctolagus cuniculus (domestic rabbit)

R. Species: Oryctolagus cunicular

R. Sequence c. N. S. Sequence con N. Sequence
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C;Date: 10-Dec-1993 #sequence_revision 23-Mar-1995 #text_change 13-Aug-1999
C;Date: 10-Dec-1999; S36800
R;Liu, N.; Fine, R.E.; Johnson, R.J.
Biochim. Biophys. Acta 1202, 70-76, 1993
A;Title: Comparison of cDNAs from bovine brain coding for two isoforms of cattle A;Reference number: S36799; MUID:93385184
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A:Residues: 1-421 <LIU>
A:Cross-references: GB:L13462; NID:g348693; PIDN:AAC37307.1; PID:g348694
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C;Keywords: calcium binding; glycoprotein
F;1-34/Domahn: signal sequence #status predicted <SIG>
F;35-421/Product: calreticulin, brain isoform 2 #status predicted <M
F;35-421/Product: endoplasmic reticulum retention signal
F;418-421/Region: endoplasmic reticulum retention signal
F;141-167/Disulfide bonds: #status predicted
F;183/Binding site: carbohydrate (Asn) (covalent) #status predicted
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C; Keywords: skeletal muscle
F;1-17/Domain: signal sequence #status predicted <SIG>
F;41-418/Region: endoplasmic reticulum retention signal
                                                                                      Score 96; DB 1; I
Pred. No. 1.5e-07;
Mismatches 0;
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                                                                                      100.0%; Sc
100.0%; Pr
tive 0;
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                                                                                      Query Match 100.
Best Local Similarity 100.
Matches 18; Conservative
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Matches 18; Conservative
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A; Residues: 1-417 <WC2>
A; Note: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536)
B; Mote: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536)
C1in. Invest. 85, 1379-1391, 1990
A; Title: Molecular cloning, expression, and chromosome 19 localization of a human Ro/SS-A; Reference number: A37047; MUD:90237213
A; Reference number: A37047
A; Molecule type: mRNA
A; Residues: 1-417 <MCA.
A; Molecule type: mRNA
A; Residues: 1-417 <MCA.
A; Note: the authors translated the codon GTA for residue 349 as Tyr
B; Rokeach, L.A.; Hasablby, JA.; Meilof, J.F.; Smeenk, R.J.; Unnasch, T.R.; Greene, B.M.;
J. Immunol. 147, 3031-3039, 1991
A; Title: Characterization of the autoantigen calreticulin.
A; Reference number: A46452; MUD:92013129
A; Accession: A46452
A; Molecule type: mRNA
A; Residues: 1-417 <MCA
A; Molecule type: mRNA
A; Residues: 1-417 <MCA
A; Molecule type: mRNA
A; Residues: 1-417 <MCA
A; Molecule type: mRNA
A; Residues: GB:M84739; NID:9179881; PIDN:AAA51916.1; PID:9179882
A; Note: sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)
B; Lile, T.S.; Newkirk, M.M.; Capra, J.D.; Sontheimer, R.D.
J. Clin. Invest. 82, 96-101, 1988
A; Ritle: Molecular characterization of human Ro/SS-A antigen. Amino terminal sequence of A; Reference number: A28812; MUID:88273610
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A: Residues: 18-27 cDUP>
A: Residues: 18-27 cDUP>
A: Residues: 18-27 cDUP>
B: Dechemistry 30, 9859-9866, 1991
A: Title: In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (calr A: Reference number: A40346; MUID: 92002034
A: Accession: A40346
A: Molecule type: protein
A: Residues: 18-34, R. < ROJ>
B: Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B: Krause, K.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
A: Title: Sequence similarity of calreticulin with a Ca(2+)-binding protein that co-purify
A: Reference number: S11475; MUID: 90380058
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A;Aclecule type: protein
A;Molacule type: protein
A;Residues: 18-32 <RRA>
R;Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
R;Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B;Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
B; Lamerdin, M.; McCready, M.; Mc
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A; Residues: 1-417 <LAM>
A; Residues: 1-417 <LAM>
A; Residues: 1-417 <LAM>
Cross-references: EMBL: AD000092; PIDN: AAB51176.1
A; Experimental source: cell line 5HL2-B; fibroblast
C; Comment: Autoantibodies specific for this protein are found in Sjogren's syndrome and C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Title: The calcium-binding protein calreticulin is a major constituent of lytic granul
A,Reference number: PH1525, MUID:93115648
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A;Introns: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
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C:Keywords: calcium binding; integrin binding
F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-417/Product: calreticulin #status predicted <MAT>
F;414-417/Region: endoplasmic reticulum retention signal
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Exp. Med. 177, 1-7, 1993
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A;Status: preliminary; translated from GB/EMBL/DDBJ
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A; Residues: 18 41 < LIE>
A; Note: 18 - Ala was also found
R; Dupuis, M.; Schaerer, E.; Ki
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Gaps

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A; Note: sequence extracted from NCBI backbone (NCBIN:128274, NCBIP:128275)
R; McCauliffe, D.P.; Zappi, E.; Lieu, T.S.; Michalak, M.; Sontheimer, R.D.; Capra, J.D.
J. Clin, Invest. 86, 332-335, 1990
A; Title: A human Ro/SS-A autoantiqen is the homologue of calreticulin and is highly h
A; Reference number: A37158; MUID:90307981
A; Accession: A37158
A; Accession: A37158
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C;Species: Xenopus laevis (African clawed frog)
C;Species: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change l3-Aug-1999
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change l3-Aug-1999
C;Date: 32-9130; T01068
R;Treves, S.; Zorzatto, F.; Pozzan, T.
Blochem. J. 287, 579-581, 1992
Blochem. J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous system.
A;Reference number: S29129; MUID:93074997
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A:Ratus: nucleic acid sequence not shown
A:Rasidues: 1-419 
A:Molecule type: mRNA
A:Residues: 1-419 
A:Cross-references: EMBL:D78589; NID:g1514956; PIDN:BAA11425.1; PID:g1514957
C:Superfamily: calreticulin
C:Keywords: calcium binding; endoplasmic reticulum
F:1-18/Domain: stypal sequence #status predicted <SIC>
F:19-419/Product: calreticulin #status predicted <MAT>
F:205-213/Region: nuclear location signal
F:415-418/Region: endoplasmic reticulum retention signal
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Cispecies: Rana rugosa (Korean Frog)
Cispecies: 29-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
Cispecession: 571343
EFBS Lett. 387, 27-32, 1996
A) Title: Canhexin: its molecular cloning and expression in the liver of the A; Reference number: 571342; MUID:96234004
A; Reference number: 571343
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Pred. No. 7.3e-05;
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Pred. No. 0.00011;
1; Mismatches 1
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88.2%;
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83.3%;
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|146 VIFSYKGKNHLISKDIRC 163
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Matches 15; Conservative
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Best Local Similarity 88.2
Matches 15; Conservative
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A,Introns: 65/1; 222/3
C,Superfamily: calreticulin
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A; Residues: 1-384 <TRE>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        California sea hare
NiAlternate names: protein 407
CiSpecies: Aplysia californica (California sea hare)
CiSpecies: TRUE: Cangy term sensitization training in aplysia leads to an increase in calreticulia Newforch number: JH0795; MUID:9308937
A;Title: Long-term sensitization training in aplysia leads to an increase in calreticulia Newforch number: JH0795; MUID:9308937
A;Title: Long-term sensitization training in aplysia leads to an increase in calreticulia Newforch type: mRNA
A;Restorimental source: abdominal applyia and antral nervous system
A;Restorimental source: abdominal applying and antral nervous system
R;Kennedy, T.E.; Gawinowicz, M.A.; Bazzilai, A.; Kandel, E.R.; Sweatt, J.D.
A;Restorimental source: abdominal applying and antral nervous system
R;Kennedy, T.E.; Gawinowicz, M.A.; Bazzilai, A.; Kandel, E.R.; Sweatt, J.D.
A;Reference number: A94207; MUID:88320566
A;Restorimental source and sea training and attabase of amino acid sequences for proteins identified and in A;Restorneces number: A6977; MUID:89276264
A;Title: Development of a database of amino acid sequences for proteins identified and in A; Apple number: A60977; MUID:89276264
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Nateriate names: Ro/SS-A autoantigen/calreticulin homolog
C; Species: Drosophila melanogaster
C; Mate: 11-Aug-1995 *sequence_revision 11-Aug-1995 *text_change 13-Aug-1999
C; Accession: A56637; A37158
R; Maith, M.J.
DNA Seq. 3, 247-250, 1992
A; Title: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticulin by Accession: A56637
A; Accession: A56637
A; Accession: A56637
A; MulD: 93208374
A; Accession: A56637
A; MulD: 93208374
A; Accession: A56637
A; MulD: A; Accession: A56637
A; A77-250
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                                         Length 421;
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Pred. No. 5.7e-06;
2; Mismatches 1; Indels
                                                                                                                   Indels
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A)Molecule type: protein
A;Molecule type: protein
A;Molecule: your calreticulin
C;Superfamily: calreticulin
C;Keywords: calcium binding; endoplasmic reticulum
C;Keywords: calcium binding; endoplasmic reticulum
F;155-foomin: signal sequence #status predicted <SIG>F;165-foomin: calreticulin #status experimental <MAT>F;164-05/Region: endoplasmic reticulum retention signal
                                    Score 96; DB 2; Pred. No. 1.5e-07;
                                100.0%; Score 96; DF
100.0%; Pred. No. 1.5
iive 0; Mismatches
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83,38;
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Rest Local Similarity 83.3
Matches 15; Conservative
                                                                         Best Local Similarity 100.
Matches 18; Conservative
                                         Query Match
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A; Cross-references: EMBL: X67598

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68.88;
                             75.0%;
77.8%;
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                                                                                                                                                          12; Conservative,
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                                                                                Conservative
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C;Superfamily: calreticulin
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Best Local Similarity
Matches 14; Conserv
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Best Local Similarity
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calreticulin autoantigen homolog precursor - fluke (Schistosoma mansoni)
c.Species: Schistosoma mansoni
c.Species: Schistosoma mansoni
c.Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C.Accession: A48573
R.Khalife, J.; Trottein, F.; Schacht, A.M.; Godin, C.; Pierce, R.J.; Capron, A.
Mol. Biochem. Parasitol. 57, 193-202, 1993
A;Title: Cloning of the gene encoding a Schistosoma mansoni antigen homologous to human
A;Reference number: A48573; MUID:93165070
A;Retus: preliminary
A;Molecule type: mRNA
A;Retus: preliminary
A;Molecule type: mRNA
A;Retuse: preliminary
A;Molecule type: mRNA
A;Retuse: preliminary
A;Note: sequence inconsistent with the nucleotide translation
A;Note: sequence extracted from NCBI backbone (NCBIN:125085, NCBIP:125086)
C;Superfamily: calreticulin
F;1-16/Domain: signal sequence #status predicted <SIG>F;390-393/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
S29129
calreticulin precursor (clone 3) - African clawed frog (fragment)
C;Species: Xenopus laevis (African clawed frog)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Accession: 529129
R;Treves, S.; Zorzato, F.; Pozzan, T.
Biochem, J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous system. A;Reference number: 529129; MUID:93074997
A;Accession: 529129
A;Molecule type: mRNA
A;Residues: 1-411 CTRE>
A;Cross-references: EMBL.X67597; NID:964608; PIDN:CAA47866.1; PID:964609
C;Superfamily: calreticulin
C;Keywords: 91ycoprotein
C;Keywords: 91ycoprotein
F;13-11/Product: calreticulin #status predicted <AIG>F;13-411/Product: calreticulin #status predicted <AIG>F;339/Binding site: carbohydrate (Asn) (covalent) #status predicted
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A;Accession: T01068
A;Actaus: translated from GB/EMBL/DDBJ
A;Gtatus: translated from GB/EMBL/DDBJ
A;Gtatus: translated from GB/EMBL/DDBJ
A;Gtatus: 1.339, XTGR' <TRW>
A;Cross-references: EMBL:X67598; NID:g64610; PIDN:CAA47867.1; PID:g64611
A;Cross-references: EMBL:X67598; NID:g64610; PIDN:CAA47867.1; PID:g64611
C;Superfamily: calreticulin
C;Reywords: glycoprotein
C;Reywords: glycoprotein
F;381-384/Region: endoplasmic reticulum retention signal
F;316/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Pred. No. 0.00066;
1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                        Score 73; DB 2; Length 384;
Pred. No. 0.00062;
                                                                                                                                                                                                                                                                                                                                                             3; Indels
                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
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77.88;
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77.8%;
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                             Query Match
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C; Species: Onchocerca volvulus
C; Species: 21-May 1990 #text_change 12-Apr-1995
C; Date: 21-May 1990 #sequence_revision 21-May 1990 #text_change 12-Apr-1995
C; Accession: A32507; Asalian, M.Y.; Soboslay, P.T.; Erttmann, K.D.; Greene, B.M.
J; Clin. Invest. 82, 262-269, 1988
A; Title: Isolation and characterization of expression cDNA clones encoding antigens o A; Accession: A32507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA Seq. 2, 235-240, 1992
A;Title: A C. elegans gene encodes a protein homologous to mammalian calreticulin.
A;Reference number: $25851; MUID:92329978
A;Accession: $25851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-395 - GBMJ-
A;Cross-references: EMBL:AF125963; PIDN:AAD14746.1; GSPDB:GN00023; CESP:Y38A10A.5
A;Experimental source: strain Bristol N2; clone Y38A10A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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C;Species: Caenorhabditis elegans
C;Date: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
C;Accession: S25851; T39966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-1955 SMI>
A; Cossinas: 1-1955 SMI>
A; Cross-references: EMBL: X59589; NID:96693; PIDN:CAA42159.1; PID:96694
B; Bauer, C.; Courtney, L.; LaPlant, Y
B; Bauer, C.; Courtney, L.; LaPlant, Y
A; Description: The sequence of C. elegans cosmid Y38A10A.
A; Reference number: 221453
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                        Length 393;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 336,
                                                                                                                                                                                                                                                                                                                                                   41K larval antigen - nematode (Onchocerca volvulus) (fragment)
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                                                                                Indels
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Score 72; DB 1; Ler
Pred. No. 0.00091;
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Pred. No. 0.0069;
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RESULT 15
T14554
Calcutated and the peet
C.Species Beta vulgaris (beet)
C.Species Beta vulgaris (beet)
C.Species 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Jun-2000
C.Species 20-Sep-1999 #sequence_revision 20-Sep-1999
C.Species 20-Sep-1999 #sequence_revision 20-Sep-1999
C.Species 20-Sep-
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1 VIENYKGKNVLINKDIRC 18
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141 VILNYKGENKLIKKEITC 158
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Search completed: January 9, 2002, 15:02:03 Job time: 190 sec

2 IFNYKGKNVLINKDIRC 18

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Perfect score:

Run on:

Sequence:

Scoring table:

Searched:

Minimum DB Maximum DB

Database

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040567 nicotiana to 099xw3 lithospermu 094373 mus musculu 094373 mus musculu 0943946 pyrococcus 09557 homo sapien 09557 homo sapien 09557 homo sapien 09573 streptococc 000867 nectria hae 099va7 pimpla hypo 094017 ictalurid hypo 094016 brachydanio 094016 brachydanio 094016 brachydanio 094016 trypanosoma 025794 trypanosoma 025794 trypanosoma 025794 trypanosoma 025794 trypanosoma 026794 trypanosoma 026794 trypanosoma
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O57577 cynops pyrr
O57576 cynops pyrr
                       solanum mel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE-20063780; PubMed-10594174;
Kuraku S., Hoshiyama D., Katoh K., Suga H., Miyata T.;
"Monophyly of lampreys and hagfishes supported by nuclear DNA-coded
                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Lampetra.
NCBI_TaxID=7753;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ó;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 318;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318 AA; 36997 MW; C88102EA1CAC1506 CRC64;
                                                                                                                                                                                                                                                                                                                                                                         01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95.4%; Score 144; DB 13; 96.3%; Pred. No. 1.3e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL, AB025328; BAA88481.1; --
InterPro; IPR001886; ER_target.
InterPro; IPR001880; Calreticulin.
Pfan; PF00262; Calreticulin; PR1NTS; PR00626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                      PRT; 318 AA
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                                                                                                                                                                                                                                                                                                   ALIGNMENTS
09FYV2
092S202
092S202
095XW3
095XW3
095XW3
095XW3
095373
090BB3
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O57577
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028949
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J. Mol. Evol. 49:729-735(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                          CALRETICULIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
 Lampetra reissneri.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best_Local Similarity
Matches 26; Conserv
                                                                                                                                                33.1
32.5
32.5
32.5
32.5
32.1
32.1
32.1
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31.8
31.8
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SEQUENCE
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  RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           090590 eptatretus
040040 hordeum vul
040041 hordeum vul
041799 zea mays (m
043712 zea mays (m
                                                                                 (without alignments)
50.536 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                      ; Search time 78.15 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
         GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                     1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                         473505 seqs, 146272329 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                       January 9, 2002, 15:03:28
                                                  OM protein - protein search, using sw model
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Q26268
Q16893
Q9U916
Q97372
Q98984
Q917110
Q91710
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040040
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041799
043712
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Gapop 10.0 , Gapext 0.5
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sp_invertebrate:*
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sp_organelle:*
sp_phage:*
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sp_bacteria:*
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151
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sp_virus:*
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Match Length DB
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142 141 140 134 128 128 128 120 120 100 100 108 84 84 84 83

4 6 6 7 8 8 8 111 112 113 114 116 116 117

Score

Result Ş.

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Amblyomma americanum.
                                                                  Best Local Similarity
Matches 24; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                       CALRETICULIN.
                                                      Query Match
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Q9U916;
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Q16893
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                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

A Susan J.M., Just M.L., Lennarz W.J.;

Susan J.M., Just M.L., Lennarz W.J.;

Cloning and Characterization of Alphap Integrin and Calreticulin in Embryos of the Sea Urchin.;

Embryos of the Sea Urchin.;

Usumitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF17915; AAD55725.1;

InterPro; 1PR000886; ER_target.

InterPro; 1PR001580; Calreticulin.

Propom; PR00262; Calreticulin; 1.

PRINTS; PR06626; Calreticulin; 1.

PROSTIE; PS00804; Calreticulin; 1.

PROSTIE; PS00804; Calreticulin. 1.

PROSTIE; PS00804; Calreticulin. 1.

PROSTIE; PS00804; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                 Strongylocentrotus purpuratus (Purple sea urchin).
Eukuryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Eucchinoidea; Echinacea; Echinoida; Strongylocentrotidae;
Strongylocentrotus.
NCBI_TaxID 7668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aplysta californica (California sea hare).
Kukuryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplysiidae; Aplysia.
NCBI_TaxID-6500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE 93998937; Pubmed 1463604;
Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;
Konnedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;
"Long-term sensitization training in Aplysia leads to an increase in calreticulin, a major presynaptic calcium-binding protein.";
Neuron 9:1013-1024(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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PRODOM; PUD01866; CALRETICULIN. 1.
PROSITE; PSO0803; CALRETICULIN. 1; 1.
PROSITE; PSO0804; CALRETICULIN. 2; 1.
PROSITE; PSO0805; CALRETICULIN. 2; 1.
PROSITE; PSO0014; ER_TARETICULIN. 1; 1.
SCQUENÇE, 405 AA; 46738 MW; 14CAAZ01840D1D69 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421 CALRETICULIN.
48822 MW; 172C664F59F41F93 CRC64;
                                                               01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 94.0%; Score 142; DB 5; Le Best Local Similarity 92.6%; Pred. No. 3.5e-12; Matches 25; Conservative 1; Mismatches 1;
                          421 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       405 AA
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                            PRT;
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InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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                          PRELIMINARY;
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RESULT
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                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Arthropoda, Chelicerata, Arachnida, Acari,
Parasitiformes, Ixodida, Ixodidae, Amblyomma.
NCBI_TaxID 6943;
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                  Score 141; DB 5; Length 405;
Pred. No. 4.6e-12;
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TISSUE-SALLVARY GLANDS;
Fain Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL, 007708; AAC79094 l.j. -
InterPro; IPR00886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
Prodom; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN.1; 1.
PROSITE; PS00805; CALRETICULIN REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
SEQUENCE 410 AA; 47485 MW; 32CCB8750A17DC54 CRC64;
                                                                                                                                                                                                                                                                                                  01-NOV-1996 (TrEMBLrel. 01, Created)
01-JAN-1999 (TrEMBLrel. 09, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Last annotation update)
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Pred. No. 6.5e-12;
93.4%; Sco. 88.9%; Pred. No. 4..
                                                                                                                                                                                                                                                              410 AA
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Drosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               136 CGPGTKKVHVIFNYKGKNHLINKEIRC 162
                                                                                                                               PRT;
                                                                                                      1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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                                                                                                                                                                                                                                                              PRT;
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92.6%;
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                                                                                                                                                                                                                                                            PRELIMINARY;
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Best Local Similarity 92.6'
Matches 25; Conservative
                                                             24; Conservative
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TISSUE=SALIVARY GLANDS;
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[1]
SEQUENCE FROM N.A.
MEDLINE=99094497; PubMed=9879888;
TSUJi N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;
"Molecular characterization of a calcium-binding protein from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Calnexin: its molecular cloning and expression in the liver of the frog, Rana rugosa."; FEBS Lett. 387:27-32(1996).
                                                                                                                                                      Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Dirofilaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
NCBI_TaxID=8410;
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J. Exp. Zool. 0:0-0(1996).
EMBL; D78589; BAA11425.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18 POTENTIAL..
387 CALRETICULIN.
44941 MW; E7741BF6AAFA5885 CRC64;
                      10, Created).
10, Last sequence update)
17, Last annotation update)
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Last annotation update)
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Pred. No. 3.1e-10;
                                                                                                                                                                                                                                                                                                                                                                  filarial parasite Dirofilaria immitis.";
MO1. Biochem. Parasitol. 97:69-79(1998).
EMBL; AF052978; AAD03405.1; ...
InterPro: IPR001580; Calreticulin.
Pfam: PF00262; Calreticulin. 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN. 1.
PROSITE; PS00803; CALRETICULIN.; 1.
PROSITE; PS00804; CALRETICULIN.; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
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PRODDM; PD001866; CALRETICULIN.
PROSTIE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
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InterPro; IPR001580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
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MEDLINE=96234004; Pubmed=8654561;
Yamamoto S., Nakamura M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 84.8%;
1 Similarity 81.5%;
22; Conservative
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01-FEB-1997 (TrEMBLrel. 02, 01-FEB-1997 (TrEMBLrel. 02, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                  01-MAY-1999 (TrEMBLrel. 01-JUN-2001 (TrEMBLrel. CALRETICULIN PRECURSOR.
                         01-MAY-1999 (TrEMBLrel.
                                                                                                                                Dirofilaria immitis.
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Best Local Similarity
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                                                                                                                                                                                                   NCBI_TaxID=6287;
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                      Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilldae; Drosophila.
NCBL_TaxID=7227;
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Onchocercidae; Litomosoides.
NCBI_TaxID=42156;
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ouery Match 84.8%; Score 128; DB 5; Length 375; Best Local Similarity 81.5%; Pred. No. 3e-10; Matches 22; Conservative 3; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 406;
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Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL, AJ001621; CAA04087.1; -.
Interpro; IRR001580; Calreticulin.
Pfam; PF00262; calreticulin. 1.
Proposite PR001666; Calreticulin. 1.
PROSTTE; PS00803; CALRETICULIN. 1.
PROSTTE; PS00803; CALRETICULIN. 2; 1.
PROSTTE; PS00804; CALRETICULIN. 2; 1.
                                                                                                                                                                          Dodo K., Sakoyama Y., Gamo S.;
"Drosophila melanogaster calreticulin for mRNA.";
Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
EMBL, AB000/19; BAA85379.1; -.
                                                                                                                                                                                                                                                                                                        InterPro; IPR001580; Calreticulin.
InterPro; IPR001580; Calreticulin.
InterPro; IPR001686; ER_target.
InterPro; IPR001686; Calreticulin; 1.
PRINTS; PR00625; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN. 1; 1.
PROSITE; PS00804; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. REPEAT; 3.
PROSITE; PS00014; ER. TARGET; UNKNOWN 1.
SEQUENCE 406 AA; 46809 MW; 68BA49A6B8ICC427 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43842 MW; 03F7642FBFF7A5B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               018478:
01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
RAL-1 PROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88.7%; Score 134; DB 5;
88.9%; Pred. No. 4.6e-11;
ive 2; Mismatches 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 88.9
Matches 24; Conservative
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                                                                                                                             SEQUENCE FROM N.A.
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                                                                                                                                                         STRAIN-OREGON-R;
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SEQUENCE
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097372
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RESULT 018478

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Length 387; Indels

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Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous system.";
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Best Local Similarity
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NON_TER
SIGNAL
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076961
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALKETICULIN (FRAGMENT).
Xenopus laevis (African clawed frog).
Eukuryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibla; Batrachia; Anura; Mesobatrachia; Pipoldea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xenopus luevis (African clawed frog).
Eukaryota; Motazos; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Butrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
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                                                                                                                                       Length 419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 343;
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PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
SEQUENCE 419 AA; 48658 MW; 2C857036769673BF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    343 AA; 40105 MW; 3E7DDAFA33B91DE1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR (FRAGMENT).
                                                                                                                                82.8%; Score 125; DB 13;
88.5%; Pred. No. 8.9e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 79.5%; Score 120; DB 13; Brst Local Similarity 81.5%; Pred. No. 3.7e-09; Matches 22; Conservative 1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       343 AA
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                                                                                                                                                                                               1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prokom; PD001866; Calreticulin; 1. PROSITE; PS00803; CALRETICULIN_1; 1. PROSITE; PS00804; CALRETICULIN_2; 1. PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109 CGPPTKKVHVIFQYKKKNLQINKDIRC 135
                                                                                                                                                                                                                                                                                              1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
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                                                                                                                                                                                                                                                          1 CGPGTKKVHVIFNYKGKNVLINKDIR 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; X67598; CAA47867.1;
InterPro: PPRO0280; Califeticulin.
Pfam; PF00262; califeticulin.
PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE BRAIN;
MEDLINE 93074997; PubMed 1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-BRAIN; - MEDLINE-93074997; Pubmed-1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Biochem. J. 287:579-581(1992).
                                                                                                            Ouery Match
Best Local Similarity 88.59
watches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
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NON_TER
SEQUENCE
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Sukaryota: Metazoa: Chordata: Craniata: Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rubinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.;
Genes Dependent on Zebrafish cyclops Function Identified by AFLP
Differential Gene Expression Screen.";
Genesis 0:0-0(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PERMIT PRODGES; CALRETICULIN.
PRINTS; PROGGS6; CALRETICULIN.
PROSITE; PROOB03; CALRETICULIN.
PROSITE; PSOOB03; CALRETICULIN.
PROSITE; PSOOB03; CALRETICULIN.2; 1.
PROSITE; PSOOB05; CALRETICULIN.2; 1.
PROSITE; PSOOB04; CALRETICULIN.2; 1.
PROSITE; PSOO014; ER.TARGET; UNKNOWN.1.
SEQUENCE 417 AA; 48723 MW; 2000C58400469986 CRC64;
                                                                                                                                                                                                                                                                                                                                                       CALRETICULIN.
891DA66E00EBBEFA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 120; DB 13;
Pred. No. 4.5e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 115; DB 13;
Pred. No. 2.3e-08;
Blochem. J. 287:579-581(1992).
EMBL: X67597; CAA47866.1; -
InterPro: IPR000886: ER_target.
InterPro: IPR000580; Calreticulin.
Pfann: PF00262; Calreticulin; 1.
PRODOM: PD001666; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN. 1.
PROSITE; PS00804; CALRETICULIN. 2.
PROSITE; PS00804; CALRETICULIN. 2.
PROSITE; PS00804; CALRETICULIN. 2.
PROSITE; PS00804; CALRETICULIN. REPERT: 2.
PROSITE; PS00804; CALRETICULIN. REPERT: 2.
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                                                                                                                                                                                                                                                                                                                              POTENTIAL
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InterPro, IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                              48344 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 79.5%;
Best Local Similarity 81.5%;
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21; Conservative
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Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN.
                                                                         3;
                        71.5%;
70.4%;
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Best Local Similarity 70.4
Matches 19; Conservative
                        Query Match 71.5
Best Local Similarity 70.4
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                             CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schistosoma
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schistosoma japonicum (Blood fluke).
Eukaryota: Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                      Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Ancylostomatoidea; Ancylostomatidae; Bunostominae; Necator.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72.5%; Score 109.5; DB 5; Length 403; 81.5%; Pred. No. 1.4e-07; ive 1; Mismatches 3; Indels 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Huggins M.C., Moloney N.A.;
Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.
Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; MBOS24; AAA2991.1.;
InterPro; IPR001580; Calreticulin.
Pfam; PF000525; Calreticulin; 1.
PROSTIE; PS00803; CALRETICULIN.
PROSTIE; PS00804; CALRETICULIN.2;
PROSTIE; P
                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood I Berry C., Fullkrug R., Beck E.;

"Calreticulin is a hookworm allergen.";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.

Berry C., Modoffg, CaAd7254.1;

InterPro: IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40385 MW; 30FAB4E8BB685D1C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21F38B0515487B6F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
                                                                         Last sequence update)
Last annotation update)
403 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Prints: Pro0262; calreticulin; 1.
PRINTS: PRO0626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       134 CGP-TKKVHDIFSYKGKNHLIKKDIRC 159
                                                Created)
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PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      403 AA; 46833 MW;
                                              01-NOV-1998 (TrEMBLrel. 08, 01-NOV-1998 (TrEMBLrel. 08, 01-UDN-2001 (TrEMBLrel. 17, CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 72.5
Best Local Similarity 81.5
Matches 22; Conservative
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PRELIMINARY;
                                                                                                                                                                              Necator americanus.
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                                                                                                                                                                                                                                                            NCBI_TaxID=51031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Signal; Allergen.
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Eukaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
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                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eptatretus burgari (Inshore hagfish).
Eukaryota; Metazoa; Chordata; Craniata; Hyperotret1; Myxiniformes; Myxinidae; Eptatretinae; Eptatretus.
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     Length 350;
                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scott J.C.;
Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF044408; AAC00015.1; -
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C57394C6FB4CD77B CRC64;
                                                                                                                                                                                                                                                                                                                                    01-JUN-1998 (TrEMBLrel. 06, Created)
01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UNU-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
Score 108; DB 5; L. Pred. No. 1.9e-07; 3; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
PROSITE; PS000014; ER_TARGET; UNKNOWN_1.
SEQUENCE 396 AA, 45813 MW, CS7394C6FB4
                                                                                                                              PRINTS; PRUDEZO; CALRETICULIN; 1.
PROBITE; PSO0803; CALRETICULIN.; 1.
                                                                                                                                                                                                                                                                                       PRT;
                                                                                                     1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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MEDLINE=20063780; PubMed=10594174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genes.";
J. Mol. Evol. 49:729-735(1999).
BEL; ABO25323; BAA88476.1; ..
InterPro; IPR000886; ER. Larget.
InterPro; IPR001580; Calreticulin.
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DR Pfam; PF00262; Calrettculin; 1.
DR PRINTS; PR00626; Calrettculin; 1.
DR PROSTE; PS00804; CALRETICULIN. 2; 1.
DR PROSITE; PS00804; CALRETICULIN_REPEAT; 3.
DR PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
FT NON_TER 1
SQ SEQUENCE 321 AA; 37367 MW; GEBDFA98D42F7AEF CRC64;
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Swarch completed: January 9, 2002, 15:03:28 Job time: 270 sec

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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	; Search time 25.18 Seconds (without alignments) 39.315 Million cell updates/sec
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sw mode	15:12:1
using	2002,
ch,	6
OM protein - protein search, using sw model	January 9, 2002, 15:12:15
OM protein -	Run on:

US-09-828-000-5 151 1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 100059 seqs, 36664827 residues Searched:

Total number of hits satisfying chosen parameters: Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	193 bo	P14211 mus musculu	P18418 rattus norv	P27797 homo sapien	~	ന	m	~	_	Q9std3 chlamydomon	~					Q23858 dictyosteli				ricinus	Q40401 nicotiana p	Q9sp22 zea mays (m	perber	Q90578 gallus gall	caenor	P39994 saccharomyc	mus m	homo	P13591 homo sapien	36 bos t	5 rattus	gall	snw snw g
SUMMARIES		CRT1_BOVIN	CRTC_MOUSE	CRTC_RAT	CRTC_HUMAN	CRTC_RABIT	CRT2_BOVIN	CRTC_DROME	RAL1_ONCVO	CRTC_SCHMA	CRTC_CHLRE	CRTC_CAEEL	CRTC_BETVU	CRT3_ARATH	CRTC_PRUAR	CRT2_ARATH	CRTC_DICDI	CRTC_ORYSA	CRT1_ARATH	CRTC_EUGGR	CRTC_RICCO	CRTC_NICPL	CRTC_MAIZE	CRTC_BERST	VDHA_CHICK	MYSD_CAEEL	YECO_YEAST	NCA2_MOUSE	NCA2_HUMAN	- 1	NCA1_BOVIN	NCA1_RAT	NCA1_CHICK	NCA1_MOUSE
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	Query Match	0.0	100.0	100.0	100.0	0.0	0.0	88.7	80.1	4.2	64.2	3.9	6.09	•	57.6		55.3	2.0	5.0	4.6	54.3	0.3	7.0	5.0	5.1	4.4	3.8	3.8	3.8	3.8	3.8	33.8	3.8	3.8
đ	, o a	100	10	10	10	100	10	œ	æ	7	Q	9	9	S	S																			
	Score	151	151		151	151	151	134	121	112	CD.	96.5	92	88	87	87	83.5	83	83	82.5	82	16	71	68	53	52	51	51	51	51	51	51	51	51
	Result No.	П	7	m	4	S	9	7	60	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	58	30	31	32	33

Q04957 bacillus ca P57531 buchnera ap	P17545 trypanosoma P17546 trypanosoma P34652 caenorhabdi	Q10548 mycobacteri P55045 streptococc	Q96529 arabidopsis P16170 xenopus lae	P36335 xenopus lae P29059 nicotiana t	O82709 pisum sativ
DPO1_BACCA MLTA_BUCAI	RPB1_TRYBB RPB2_TRYBB CALX CAEEL	Y887_MYCTU	PURA_ARATH NCA1_XENLA	NCA2_XENLA	CALX_PEA
7			7		-
877 359	1766 1766 619	170	490 1088	1092	551
32.5	32.1 32.1 31.5	31.1	$\frac{31.1}{31.1}$	31.1	30.8
49	48.5 48.5	47	47	46.5	46.5
34	36 37 38	39	41	44	4.5

## ALIGNMENTS

RESULT

				(HACBP).		Euteleostomi;	ia, boyotaga,					a T., Isobe T.			BOTH HIGH AND											Glycoprotein	•													R (POTENTIAL).	
	400 AA.		update)	update) (CALREGULIN)		Chordata; Craniata; Vertebrata; Euteleostomi;	valitialitia, rec					kuyama T., Shinoda	structure of bovine brain calreticulin.";		UM. THERE ARE		C RETICULUM LUMEN								•	3.	•	Α.	.N.	A APPROAIMATE KEPEATS.				X APPROXIMATE REPEATS.			ASP/GLU/LYS-RICH.		N-LINKED (GLCNAC).	PREVENT SECRETION FROM ER 7048680806898881 CRC64	
	PRT;	Created)		t annotatio RM 1 (CRP55		ata; Crania	trodacty ta,				200	Рирмес=візэ/эз; К., Yamakawa Y., О	vine brain	. !			ENDOPLASMI	O THE CALRE	eticulin.	arget.	ID; I.	culin. 1	ET; 1.	CALRETICULIN_1; 1.	CULIN_2; 1.	CALRETICULIN_REPEAT; lum: Calcium-binding:	N-DOMAIN.	P-DOMAIN.	,	4 A APP	1-2.	1-3.	1-4.	3 X APP	2-1.		ASP/GLU		N-LINKE	3	,
	STANDARD;	34,	34,	(Rel. 34, Last , BRAIN ISOFORM	(Bovine).	Metazoa; Chord	ae; Bos.					/4; Fubmed= eta K., Yam	cture of bo	8:435-442(1	FUNCTION: THIS PROTEIN BINDS LOW AFFINITY CALCIUM-BINDING	ONOMER	SUBCELLULAR LOCATION: ENDOPLASMIC	: BELONGS T	IPR001580; Calreticulin	00886; ER_t	calreticulin;	66. Calreticulin.	14; ER TARG			; CALRE Culum:		_			3 204			2 280		080		7		97 400	Ç
NIV	CRT1_BOVIN		01-OCT-1996 (R	2	Bos taurus (Bo	Eukaryota; Metazoa;	Bovidae; Bovinae;	NCBI_TaxID=9913;	_	SEQUENCE.	TISSUE=Brain;	MEDLINE=941831/4; Matsuoka K., Seta	"Covalent stru	၀၀		- 1				InterPro; IPR0	PIAM; PrOUZBZ; CA	ODOM: DOOO	PROSITE; PS00014			PROSITE; PSOUGUS Endoplasmic reti			DOMAIN 292	DOMAIN 17	REPEAT 193				REPEAT 242				OHYD 1	SLTE SECTENCE 400	۳
CRT1 BOVIN	ID CR			DE CA		OC En						RA Ma			; ;	٠.					אט פר					KW En				FT DC					FT RE		_			FT SI	•

100.0%; Score 151; DB 1; Length 400; 100.0%; Pred. No. 2.4e-14;

Query Match • Best Local Similarity

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CRTC_RAT
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DOMAIN
DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE, 93013037; Pubmed 1398135;
MAZZATELLA R.A., Gold P., Cunningham M., Green M.;
"Determination of the sequence of an expressible cDNA clone encoding ERp60/calrequin by the use of a novel nested set method.";
Gene 120:217-225(1992).
 Gaps
                                                                                                                                                                                                                                                                                                                   Smith M.J., Koch G.L.E.;
Multiple zones in the sequence of calreticulin (CRP55, calregulin,
HACBP), a major calcium binding ER/SR protein.";
KMBO J. 8:3581-3586(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE Fibroliast:
MCDLINE.95009907; Pubbed 7523108;
Substaction and sequencing of familiar and novel murine proteins using preparative two-dimensional gel electrophoresis.";
Electrophoresis 15:735-745(1994).
I. FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
I. SUBMULT: MONOMER (BY SIMILARITY).
I. SUBCELLULAR LOCATION: PUDOLASMIC RETICULUM LUMEN.
I. SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                          Kukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mummulia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID-10090;
 ö
                                                                                                                                                        01-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
 Indels
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PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS008043; CALRETICULIN_1; 1.
PROSITE; PS008043; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN-BALB/C; TISSUE-Liver;
MEDLINE-90059955; Pubmed-2583110;
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                                                                                                                    416 AA
 0; Mismatches
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PIR; JC1444; JC1444.

SWISS-ZDPAGE; P14211; WOUSE.

MAD; MAT:88222; Calr.

InterPro; IPR001580; Calreticulin.

InterPro; IPR001886; ER_target.

Ptam; PF00262; Calreticulin; IPRINTS; PR00626; CALRETICULIN; I
                                         120 CGPGTKKVHVIFNYKGKNVLINKDIRC 146
                          1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                    PRT;
                                                                                                                                           01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; X14926; CAA33053.1; -. EMBL; M92988; AAA37569.1; -.
27; Conservative
                                                                                                                    STANDARD;
                                                                                                                                                                                                               (Mouse)
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                                                                                                                                                                                                             Mus musculus
                                                                                                                 CRTC_MOUSE
P14211;
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CRTC_MOUSE
 Matches
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nakamura M., Moriya M., Baba T., Michikawa Y., Yamanobe T., Arai K., Okinaga S., Kobayashi T., "An endoplasmic reticulum protein, calreticulin, is transported into the acrosome of rat sperm.", Exp. Cell Res. 205:101-110(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P18418; P10452;
01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (CALBP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-SPRAGUE-DAWLEY, TISSUE-Brain cortex;
MEDLINE-90370496; PubMed-2395661;
Murthy K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
Holmes C., Patel Y.C.;
Rictural homology between the rat calreticulin gene product and
the Onchocerca volvulus antigen Ral-1.";
Nucleic Acids Res. 18:4933-4933(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-95181573; PubMed=7876339; Soennichsen B., Fuellekrug J., van Nguyen P., Diekmann W., Robinson D.G., Mieskes G.; Retinson D.G., Mieskes G.; Retention and retrieval: both mechanisms cooperate to maintain calreticulin in the endoplasmic reticulum."; J. Cell Sci. 107:2705-2717(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                     Length 416;
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24C03B0091340BDB CRC64;
                                                                          C-DOMAIN.
4 X APPROXIMATE REPEATS.
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                                                                                                                                                                                                                                                                                                                                                                                                                     Score 151; DB 1;
Pred. No. 2.5e-14;
; Mismatches 0;
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               CALRETICULIN
                                     N-DOMAIN
                                                           P-DOMAIN
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STRAIN~SPRAGUE-DAWLEY;
MEDLINE~93202172; PubMed~8453984;
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                                                                                                                                                                                                                                                                                                                                                            AA;
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Best Local Similarity
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SEQUENCE
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CRTC_HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Identification of protein disulfide isomerase and calreticulin as autoimmune antigens in LEC strain of rats.";
Blochin. Blochs. Acta 1158:339-34(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCULIUAR LOCATION ENDOPLASMIC RETICULUM LUMEN.
-!- SUBCLIULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
-!- CAUTION: WAS ORIGINALLY (RRE. 2) THOUGHT TO BE D-BETA-
HYDROXYBUTYRATE DEHYDROGENASE.
                                                                                           Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M., Maclennan D.H., Maldolesi J., Pozzan T.: (Zalreticulin is a candidate for a calsequestrin-like function in Ca2(+)-storage compartments (calciosomes) of liver and brain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                             Yokol T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi R.,
Kamataki T.;
                                                                                                                                                                                                                                        STRAIN-SPRAGUE-DAWLEY; TISSUE-Testis;
MEDINE-92360010; PubMed-1497655;
Nakamura w. Michikawa Y., Baba T., Okinaga S., Arai K.;
"Calreticulin is present in the acrosome of spermatids of rat
Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
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PROSITE; PSO0805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal
SIGNAL 1 17
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4 X APPROXIMATE REPEATS.
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P-DOMAIN.
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PRODOM; PR001866; CALTECICULIN; 1.
PROSITE: PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; X53363; CAA37446.1; -.
EMBL; X13702; CAA31987.1; ALT_SEQ.
EMBL; X79327; CAA55890.1; -.
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InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                           SEQUENCE OF 18-29.
MEDLINE=91054414; Pubmed=2241926;
                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=LEC; TISSUE=Liver;
MEDLINE=94072621; PubMed=8251535;
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PIR; S11205; S11205.
PIR; S13045; S13045.
PIR; A49176; A49176.
PIR; S45036; S45036.
PIR; JH0819; JH0819.
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McCauliffe D.P., Lux F.A., Lieu T.S., Sanz I., Hanke J., Newkirk M.M.,
Bachinski L.L., Itoh Y., Sicillano M.J., Reichlin M., Sontheimer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [5] SEQUENCE OF 18-36. MEDLINE=92002034; PubMed=1911778; MEDLINE=92002034; PubMed=1911778; Rojiani M.V., Finlay B.B., Gray V., Dedhar S.; In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (calreticulin) with a highly conserved amino acid sequence in the cytoplasmic domain of integrin alpha subunits."; Biochemistry 30:9859-9866(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. MEDINDE-1733953; MEDLINE-92129342; PubMed-1733953; MCGauliffe D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; "The 5'-flanking region of the human calreticulin gene shares homology with the human GRP78, GRP94, and protein disulfide isomerase
                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-AUG-1992 (Rel. 23, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
20-AUG-2011 (Rel. 40, Last annotation update)
20-AUG-2011 PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (52 KDA RIBONUCLEOPROTEIN AUTOANTIGEN RO/SS-A).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lamerdin J., McCready P., Stilwagen S., Ramirez M., Carrano A.; Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                           Length 416;
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                                           2-2.
2-3.
ASPIGU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
W; 2E6713CED31A2970 CRC64;
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3 X APPROXIMATE REPEATS. 2-1.
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                                                                                                                                                                                                                                           Score 151; DB 1;
Pred. No. 2.5e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     417 AA.
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                                                                                                                                                                                                                                                                                                                                                                137 CGPGTKKVHVIFNYKGKNVLINKDIRC 163
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J. Clin. Invest. 85:1379-1391(1990)
                                                                                                                                                                                                                                                                                                                                            1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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SEQUENCE OF 18-32.
MEDLINE-90380058: PubMed-2400400;
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MEDLINE=92013129; Pubmed=1919005;
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01-AUG-1992 (Rel. 23, Last sequ
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                                                                                                                                                                                                                                                          -1- CAUTION: WAS ORIGINALLY (REF. 2) THOUGHT TO BE THE RO AUTOANTIGEN.
                                                                                                                                                                                                         "Micromequences of 145 proteins recorded in the two-dimensional gel protein database of normal human epidermal keratinocytes."; Electrophoresis 13:960-969(1992).
"Sequence similarity of calreticulin with a Ca2(+)-binding protein that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store in HL-60
                                                                                 Mochstrusser D.F., Frutiger S., Paquet N., Bairoch A., Ravier F. Pasquall C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas Appel R.D., Hughes G.J.;
                                                                                                                                                                                      Rasmussen H.H., van Damme J., Puype M., Gesser B., Celis J.E., Vandekerckhove J.;
                                                                                                            "Human liver protein map: a reference database established by microsequencing and gel comparison."; Riectrophoresis 13:992-1001(1992).
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PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
RGOPLUHMIC FELICULUM; CALCULIN_REPEAT; 3.
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P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
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Interpro; IPR000886; ER_target.
                                                                      MEDLINE 93162045; PubMed 1286669;
                                                                                                                                                                            MEDLINE-93162043; PubMed-1286667;
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PIR; A37047; A37047
PIR; S11475; S11475.
PIR; A42330; A42330.
PIR; A46452; A46452.
A46452; A66452.
Aarhus/Ghent-2DPAGE; 947197; HUMAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfum; PF00262; calreticulin; 1.
                              Biochem. J. 270:545-548(1990).
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Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L.,
Vance J.E., Opas M., Michalak M.;
"Calreticulin, and not calsequestrin, is the major calcium binding
protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic
reticulum.";
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TISSUE'SIOW-twitch skeletal muscle;
MEDILINE 90094320; pubMed-2600080;
Fliegel L., Burns K., Maclennan D.H., Reithmeier R.A.F., Michalak M.;
"Modecular cloning of the high affinity calcium-binding protein (calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Biol. Chem. 264:21522-21528(1989).
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MEDLINE-201654414, PubMed-2241926;
Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
Galreticulin is a candidate for a calsequestrin-like function in
Ca(+)-storage compartments (calciosomes) of liver and brain.";
Biochem. J. 271:473-480(1990).
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
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MEDLINS-91282795; PubMed-2059224;
Fliegel L., Michalak M.;
"Fast-twitch and slow-twitch skeletal muscles express the same
                                                                                                                                                                                                                                                                                                                            Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
01-CCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                        PREVENT SECRETION FROM ER. MISSING (IN REF. 3).
BC37C3C0F1054FB2 CRC64;
                                                                   3 X APPROXIMATE REPEATS. 2-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      isoform of calreticulin.";
Blochem. Biophys. Res. Commun. 177:979–984(1991).
                                                                                                                                                                                                                                                                                                                            100.0%; Score 151; DB 1;
100.0%; Pred. No. 2.5e-14;
ive 0; Mismatches 0;
                                                                                                                                                                 ASP/GLU/LYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     418 AA.
                                                                                                                                                                                     BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                              137 CGPGTKKVHVIFNYKGKNVLINKDIRC 163
                                                                                                                                                                                                                                                                                                                                                                                                                        1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
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MEDLINE:92002038; PubMed-1911780;
2-1-2
                                                                                                                                                                                                                                                             X.
                                                                                                                                                                                                                                                           48141
                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.
Matches 27; Conservative
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221
238
255
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269
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                                                                                                                                                                                                                                                      417 AA;
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P15253;
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                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration
      15-JUL-1998 (Rel. 36, Last annotation update) CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                          Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULIN FAMILY.
                                                                Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                               Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                  Bos taurus (Bovine).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
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CALRETICULÍN, BRAIN ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805, CALRETICULIN_REPEAT; 3.
Endoplasmic relculum; Calcium-binding; Repeat; Signal.
SIGNAL 1 34 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C-DOMAIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1-4.
3 x APPROXIMATE REPEATS.
2-1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASP/GLU/LYS.FRICH.
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P-DOMAIN.
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; Ex.target.
InterPro; PR00626; Calreticulin; I.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                            MEDLINE-93385184; PubMed-8373827;
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                                                                                    Bovinae; Bos
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                                                                                                                               SEQUENCE FROM N.A.
                                                                                               NCBI_TaxID-9913;
                                                                                                                                                                                                              calreticulin.
                                                                                                                                               TISSUE-Brain;
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                                                                                    Bovidae;
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                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modifited and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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2-2.
A2-3.
ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
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PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -> T (IN REF. 5).
B6082B689DC763A6 CRC64;
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4 X APPROXIMATE REPEATS
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Pred. No. 2.6e-14;
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(Rel. 32, Last sequence update)
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P-DOMAIN.
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PIR; S13047; S13047.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00262; calreticulin; 1. PRNTMS; PR00626, CALRETICULIN. PRODOM: PD001866; Calreticulin; 1. PROSITE; PS00104; ER_TARGET; 1.
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PIR; C33208; C33208.
PIR; D33208; D33208.
PIR; E33208; E33208.
PIR; F33208; F33208.
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Best Local Similarity
Matches 27; Conserv
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Amanatides P.G., Scharer S.E., Li P.W., Hoskins R.A., Galle R.F.,
B. Amanatides D.G., Scharer S.E., Li P.W., Hoskins R.A., Galle R.F.,
B. Standon R.C., Nagers Y.-H.C., Blazej R.G., Chango D., Chen L.X.,
B. Brandon R.C., Nagers Y.-H.C., Blazej R.G., Chango M., Henderson S.N.,
Ballwa R.M., Doyle C., Baxter E.G., Halt G., Chango M., Miklos G.L.G.,
Ballwa R.M., Basu A., Baxendata J., Baytaktaroque L., Beasley E.M.,
Ballwa R.W., Basu A., Baxendata J., Baytaktaroque L., Beasley E.M.,
Bardson K.Y., Bencos P.V., Bernan B.P., Bhandari D., Bolshakov S.,
Borkova D., Betchan M.R., Bouck J., Brokstein P., Brotter P.,
Rokrova D., Betchan M.R., Bouck J., Brokstein P., Brotter P.,
R. Hurtis K.C., Busam D.A., Buller H., Cadleu E., Conter A., Chandra I.,
R. Cherry J.M., Caving S., Dalike C., Davenport L.B., Davies P.,
A cheblos B., Delchar A., Danjak C., Davanport L.B., Davies P.,
A cheblos B., Delchar A., Danjak C., Margon P., Protter S., Pleiz S.M.,
R. Manner K., Gorgel J.H., Garle J., Harris M.,
Alush R., Gabriellun A.E., Garry N.S., Gabbart W., Elasser K.,
Alodik A., Gong F., Gorrell J.H., Guz J., Galbart W., Harris M.,
Alalah M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
Jalali M., Kalush F., Kurpen G.H., Ke Z., Kennison J.A., Ketchum Hostin D., Houston K.A., Howling Y., Lin X.,
Mattai B., McIntosh T.C., McIeod M.P., McPherson D.L.
Alexko P., Lei Y., Levitsky A.A., Li J.J., Li Z., Liang Y., Lin X.,
Muttai B., Wolmun S.M., Murphy B., Murphy L., Muzzhy D.M., Neese M.G.,
Rhangen B.C., Sufer K., Hamos I., Simpson M., Stupski M.P., Sanith T.,
Shue B.C., Soffen K., Wassatama D.A., Wellsen D.Y., Wang X.,
Wassatam D.A., Wassatama D.A., Welniscon D.Y., Wang S., You G., Shen S.,
Walliams S.M., Woodage T., Worley K.C., Wu D., Yang S., Zho Q., A.,
Walliams S.M., Wyocake E.W., Rubin G.M., Venter E.,
R., Whyers E.W., Rubin G.M., Venter E.,
R., Shiner K., Sainer M., Walley M., Walley G.C.
                                                                                                            Dronophila melanogaster (Fruit fly).
Rukaryota; Metazoa; Arthropoda; Trachesta; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroideu; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercul RAL-1 antigen and an aplysia mannary molecula," ".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE 90307981; PubMed 2365822;
McCaulliffo D.P., Zappi E., Lieu T.S., Michalak M., Sonthelmer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. CLIN. INVEST. 86:332-335(1990).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APFINITY CALCIUM-BINDING SITES.
-!- SUBBELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                        Nucleotide sequence of a Drosophila melanogaster gene encoding calreticulin homologue.";
                01-APR-1993 (Rel. 25, Created)
01-CT-1993 (Rel. 27, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN_PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-20196006; PubMed-10731132;
                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE 93208374; PubMed-1296819;
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                                                                                                                                                                                                                                                                                                                                 DNA Seq. 3:247-250(1992).
                                                                                                                                                                                                                                                                                                                calreticulin homologue
                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                          Ephydroidea; Dros
NCBL_TaxID 7227;
                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-BERKELEY
P29413; Q9VHA3;
                                                                                              CRC OR CG9429.
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the European Bioinformatics Institute. There are no restrictions on its
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or send an email to license@isb.ch).
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MEDLINE-94341871; PubMed-7520419;
ROKeach L.A., Zimmerman P.A., Unnasch T.R.;
Rokeach L.A. at Cimmerman P.A., Unnasch T.R.;
Reptopes of the Onchocerca volvulus RALl antigen, a member of the calreticulin family of proteins, recognized by sera from patients with onchocerciasis.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Nematoda, Chromadorea, Spirurida, Filarioidea,
Onchocercidae, Onchocerca,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88.7%; Score 134; DB 1; Length 406; 88.9%; Pred. No. 6.7e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; Calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PROSTE; PS00014; ER_TARGET; 1.
PROSTTE; PS00804; CALRETICULIN_1; 1.
PROSTE; PS00804; CALRETICULIN_2; 1.
PROSTE; PS00805; CALRETICULIN_2; 2.
PROSTE; PS00805; CALRETICULIN_2; 2.
PROSTER PS00805; CALRETICULIN_2; 2.
PROSTER PS00805; CALRETICULIN_2; 2.
PROSTER PS00805; CALRETICULIN_2; 2.
PS00805; CALR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CALRETICULIN.
G -> A (IN REF. 3).
V -> L (IN REF. 3).
; 65D72C69D0BEC427 CRC64;
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01-NOV-1995 (Rel. 32, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     388 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Infect. Immun. 62:3696-3704(1994).
                                                                                                                                                                                                                                                                                                                                    EMBL, AE003683; AAF54416.1; -. PIR, A37158; A37158.
FlyBase; FBgn0005585; Crc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46808 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 53-388 FROM N.A.
                                                                                                                                                                                                                                                                                                 EMBL; X64461; CAA45791.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24; Conservative
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P11012;
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RAL1_ONCVO
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REPEAT
CARBOHYD
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CRTC_CHLRE
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modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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OR0814; 026562;
01-JUN-1994 (Rel. 29, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-FEB-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (SM4 PROTEIN).
SCHISTICOSOMA mansoni (Blood fluke).
Eukaryota; Metazoa; Platyhelminthes; Turbellarian Platyhelminths;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochem. Parasitol. 62:313-315(1993).
FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APFINITY CALCIUM-BINDING SITES.
SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=PUERTO RICAN;
BDLINE=94.8075; PubMed=8139623;
Khallfe J., Pierce R.J., Godin C., Capron A.;
"Cloning and sequencing of the gene encoding Schistosoma mansonicalreticulin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rhabdítophora; Eulecithophora; Revertospermata; Mediofúsata;
Neodermata; Trematoda; Digenea; Strigeldida; Schistosomatoidea;
Schistosomatidae; Schistosoma.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN-PUBRTO RICAN;
MEDLINE-93165070; PubMed-8433712;
Khalife J., Trottein F., Schacht A.-M., Godin C., Pierce R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Cloning of the gene encoding a Schistosoma mansoni antigen homologous to human Ro/SS-A autoantigen."; Mol. Biochem. Parasitol, 57:193-202(1993).
                                                                                                                                                                                                                                                                                                Length 388;
                                                                                                                                                                                                                                                                                                                     3; Indels
                                                                                                                                                                                                                                                          BY SIMILARITY.
9537F298A2D31CD6 CRC64;
                                                                                                                                               RAL-1 PROTEIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                           X APPROXIMATE REPEATS
                                                                                                                                                                                                                                               ARG/LYS-RICH (BASIC).
                                                                                                                                                                                                                                                                                               Score 121; DB 1;
Pred. No. 4.7e-10;
                                                                                                                                                                                                                                                                                                                     Mismatches
                                                              Pfam; PF0026; calreticuln; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; P0001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 3.
                                                                                                                           Calcium-binding; Repeat; Antigen; Signal. SIGNAL 17 POTENTIAL.
          Littles requires a license agreement (S
send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                  1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                   Fik; A3230/; A3230/.
InterPro; IPR001580; Calreticulin.
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                                                                                                                                                                                                                                                                                                80.18;
77.88;
                                      EMBL; M20565; AAA59056.1; -.
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                                                                                                                                                                                              253
253
267
267
281
388
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Best Local Similarity
                                                                                                                                                                                                                                                                  388 AA;
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                                              PIR; A32507;
                                                                                                                                                                                                                                                                                                                   21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Capron A.
                                                                                                                                                                                                                                                         DISULFID
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                                                                                                                                                                                                                                                                                                                                      PRINTS; FINCE
PROBLE; PSO001466; CALTELIZE
PROSITE; PSO00014; ER_TARGET; 1.
PROSITE; PS00004; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_BREPEAT; 1.
PROSITE; PS00805; CALRETICULIN_BREPEAT; 1.
PROSITE; PS00805; CALRETICULIN_BREPEAT; 1.
POTENTIAL.
POTENTIAL.
POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chlamydomonas reinhardtii.
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
Chlamydomonadaceae; Chlamydomonas.
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-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALRETICULIN.
4 X 12 AA APPROXIMATE REPEATS.
1-1.
1-2.
1-3.
1-4.
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45F59857C21940D2 CRC64;
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N-LINKED (GLCNAC. ..)
SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IL (IN REF. 2).
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Pred. No. 9.2e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR.
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                                                                                                                                                                                                                                                                                                                Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
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InterPro; IPR000886; ER_target.
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77.8%;
                                                                                                                                                                                                          EMBL; M93097; AAA29854.1; -.
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P00268; 4RXN.
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Zuppini A., Kaydamov C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             393
254
200
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Matches 21; Conserv
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SEQUENCE FROM N.A.
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Viereck R.;
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                                        InterPro;
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          OR RESERVED ON THE CONTRACT OF THE CONTRACT OF
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                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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   -1- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoldea; Rhubditidae; Peloderinae; Caenorhabditis.
NCHI_TaxID:6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CALRETICULIN.
PREVENT SECRETION FROM ER (POTENTIAL).
DD3BA3AFFBF61C9B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA Seq. 2:235-240(1992).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APPINITY CALCIUM-BINDING SITES.
-!- SUMCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SUMLERIATY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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                                                                                                                                                                                                                                                                                                                                                  HMHL, AJ000765, CAB54526.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Plam; Pr00262; Calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PRODOM; PS0019865; Calreticulin; 1.
PROSITE; PS000404; ER_TARGET; 1.
PROSITE; PS000803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64.2%; Score 97; DB 1; Length 420;
69.2%; Pred. No. 1.4e-06;
Live 2; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 395 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CGPGTKKVHVIFNYKGKNVLINKDIR 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-BRISTOL N2;
MEDLINE 92329978; PubMed 1627827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47327 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X59589; CAA42159.1; -. PIR; S25851; S25851.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 69.29
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cuenorhubditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRTC_CAEEL
P27798;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRTC_CAREL
SO THE TENT NEW TONE OF THE PROPERTY OF THE PR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beta vulgaris (Sugar beet).

Rekaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophylidae; Caryophylidae; Caryophylidae; Caryophylidae; Chenopodiaceae; Beta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 395;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4; Indels
                                            PRINTS, PRODGS6; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_PRGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY.

PREVENT SECRETION FROM ER.
35CA7D2EC1D56B03 CRC64;
                                                                                                                                                                                                                                                                                                                                C-DOMAIN.
4 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63.9%; Score 96.5; DB 1; 66.7%; Pred. No. 1.5e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ASP/GLU/LYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     416 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4; Mismatches
                                                                                                                                                                                                                             POTENTIAL.
CALRETICULIN.
                                                                                                                                                                                                                                                                              N-DOMAIN
                                                                                                                                                                                                                                                                                                           P-DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133 CGP-TRRVHVILNYKGENKLIKKEITC 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AJ002057; CAA05161.1; -. Mendel; 32549; Betvu;1166;32549.
                            Pfam; PF00262; calreticulin; 1.
IPR000886; ER_target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45616 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN=VV-D/ZR5; TISSUE=Leaf;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 66.7
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                   233
250
292
264
278
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Mendel; 16507; Arath;1166;16507
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                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                  CONFLICT
                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9XF98;
                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
CRTC_PRUAR
                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                       SITE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -1- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-1- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                      Arabidopsis thallana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shinn P., Brooks S., Buehler E., Chao Q., Johnson-Hopson C., Khan S., Kim C., Altafi H., Bei Q., Chin C., Chiou J., Choi E., Conn L., Conway A., Gonzales A., Hansen N., Howing B., Koo T., Lam B., Lee J., Lera C., Li J., Liu A., Liu S., Mukharsky N., Nguyen M., Palm C., Pham P., Sakano H., Schwartz J., Southwick A., Thaveri A., Toriumi M., Vaysberg M., Yu G., Federspiel N.A., Theologis A.,
                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                         CALRETICULIN.

N-LINKED (GLCNAC. . ) (POTENTIAL).

N-LINKED (GLCNAC. ) (POTENTIAL).

PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nelson D.E., Glaunsinger B., Bohnert H.J.; "Abundant accumulation of the calcium-binding molecular chaperone calreticulin in specific floral tissues of Arabidopsis thaliana.";
                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                              Score 92; DB 1; Length 416; Pred. No. 7.1e-06; 1; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                    565FEC3489F77CA7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                          CRT3_ARATH STANDARD; PRT; 424 AA. 004153; 095xE7; 20-406-2001 (Rel. 40, Created) 20-50f-2001 (Rel. 40, Last sequence update) 20-50f-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                            1; Mismatches
                                                                                                                                                                                                                                                                                                                                          143 CGYSTKKVHAIFNYNDTNHLIKKDVPC 169
                                                                                                                                                                                                                                                                                                                        1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AC006932; AAF22902.1; ALT_SEQ
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-97303616; PubMed-9159940;
               InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plant Physiol. 114:29-37(1997).
                                                                                                                                                                                                                    48136 MW;
                                                                                                                                                                                                                                                               60.98;
63.08;
                                                                                                                                                                                                                                                      Ouery Match
Best Local Similarity 63.0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U66345; AAC49697.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALRETICULIN 3 PRECURSOR. CRT3 OR T27G7.13.
                                                                                                                                                                                                                    416 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-3702;
                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                              CRT3_ARATH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00003; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                  PRINTS; PRO0626; CALRETICULIN.
PRODOM; PROD01866; CALRETICULIN. 1.
PROSITE; PSO0014; ER TARCT; 1.
PROSITE; PSO0804; CALRETICULIN. 1; 1.
PROSITE; PSO0805; CALRETICULIN. 2; 1.
PROSITE; PSO0805; CALRETICULIN REPRAT; FALSE_NEG.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae;
Spermatophyta; Magnoliophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids I; Rosales; Rosaceae; Prunus.
NCBI_TaxID=36596;
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                     POTENTIAL.
CALRETCULIN 3.
CALINED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=CV. BERGERON; TISSUE=Mesocarp, and Endocarp,
Mbeguie-A-Mbeguie D., Fils-Lycaon B.R.;
"Molecular cloning and nucleotide sequence of a calreticulin from
                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                        Length 424;
                                                                                                                                                                                                                                                                                                                                                                                           6; Indels
                                                                                                                                                                                                                                                                             F -> S (IN REF. 2).
650E0AE8342F0B97 CRC64;
                                                                                                                                                                                                                                                                                                                                                      58.3%; Score 88; DB 1; 155.6%; Pred. No. 2.7e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 AA.
                                                                                                                                                                                                                                                                                                                                                                                             6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF134733; AAD32207.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                                                                                 49904 MM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prunus armeniaca (Apricot).
                                                                                                                                                                                                                                                                                                                                                                                           15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                       28
424
97
424
279
                                                                                                                                                                                                                                                                                                 424 AA;
                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                       Multigene family.
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Mendel; 31147; Arath;1166;31147
Mendel; 16506; Arath;1166;16506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Job time: 657 sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the SWiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to licenseélsb-sib.ch.
                                                                                                                                       ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q38858; 080486; 004152;
20-40C-2001 (Rel. 40, Last sequence update)
20-40G-2001 (Rel. 40, Last sequence update)
20-40G-2001 (Rel. 40, Last annotation update)
CALKWITCULIN 2 PRECURSOR
CMT2 OR CRTL OR T12M4.8.
Arabidopsis thaliana (Mouse-ear cress).
Rukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosida II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-CV. COLUMBIA;
STRAIN-CV. COLUMBIA;
VyHOTSKAIA V.S., Schwartz J.R., Toriumi M., Yu G., Oji O., Kwan A.,
Liu S., Li J., Araujo R., Au M., Brendel V., Buehler E., Conway A.B.,
Conway A.R., Dewar K., Feng J., Kim C., Kurtz D., Li Y., Palm C.J.,
Shinn P., Sun H., Davis R.W., Ecker J.R., Federspiel N.A.,
                                                                                                                                       Gaps
POTENTIAL.
CALRETICULIN.
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-174 FROM N.A.
MEDLINE 97303616; PubMed 9159940;
Milson D.E., Glaunsinger B., Bohnert H.J.;
"Abundant accumulation of the calcium-binding molecular chaperone calreticulin in specific floral tissues of Arabidopsis thaliana.";
Plant Physiol. 114:29-37(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 16-424 FROM N.A.
STRAIN-CV. LANDSBERG ERECTA; TISSUE Flower;
Benedettl C.E., Turner J.G.,
"Nucleotide sequence of an Arabidopsis thaliana cDNA encoding a
                                                                                                                                     ó
                                                                                                          57.6%; Score 87; DB 1; Length 421; 59.3%; Pred. No. 3.7e-05;
                                                                                                                                     10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (NOV-1997) to the EMBL/GenBank/DDBJ databases
                                                                   4F5F94CBAA6C6690 CRC64;
                                                                                                                                     1; Mismatches
                                                                                                                                                                                                                                                             424 AA
                                                                                                                                                                               1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                             PRT;
22
421
CA
56
N-
156
N-
421
PF
48416 MW;
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Mendel; 6599; Arath;1166;6599.
                                                                                                                      Local Similarity 59.33 ths 16; Conservative
                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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                                                     SITE
                          CARBOHYD
                                        CARBOHYD
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Matches
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CRT2_ARATH
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InterPro; IPR001580; Calreticulin.
InterPro; IPR001686; ER.target.
InterPro; IPR00086; ER.target.
Pfam; PP00262; Calreticulin; 1.
ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
Endoplasmic_reticulum; Calcium-binding; Repeat; Signal; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                CALRETICULIN 2.
N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                  Length 424;
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                                                                                                                                                                                                                                                 LVAI -> NSAR (IN REF. 3).

G -> E (IN REF. 1).

P -> T (IN REF. 3).

V -> E (IN REF. 3).

W, 514385EBAE810DD7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                 59.3%; Score 87; DB 1; 59.3%; Pred. No. 3.8e-05;
                                                                                                                                                                                                                                                                                                                                                                                                 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Search completed: January 9, 2002, 15:12:15
                                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                 48084 MW;
                                                                                                                                                                                                                                                                                                                                                                 Query Match 57.6
Best Local Similarity 59.3
Matches 16; Conservative
                                                                                                                                                                                   424
424
424
1155
236
408
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                                                                                                                                                              Multigene family.
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59
421
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155
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408
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CARBOHYD
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Compugen Ltd.
GenCore version
Copyright (c) 1993 - 2000
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	Search time 43.73
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(without alignments)
47.032 Million cell updates/sec US-09-828-000-5

1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27 Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

219241 Total number of hits satisfying chosen parameters:

219241 segs, 76174552 residues

Searched:

seq length: 0 seq length: 200000000 Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

pirl:* pir2:* pir3:* pir4:* PIR_68:* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	calreticulin, brai	calreticulin precu		calreticulin precu	calreticulin precu	calreticulin precu	calreticulin precu	calreticulin homol	calreticulin precu	41K larval antigen	calreticulin (clon	calreticulin precu	calreticulin autoa	calreticulin precu	calreticulin - bee	calreticulin - bar	ı	calreticulin precu	calreticulin (Crt1	calreticulin - cas	probable calreticu	hypothetical prote	calreticulin - com	calreticulin call	helicase [imported	vitamin D3 hydroxy	pyocin protein PA3	myosin heavy chain	hypothetical prote
SUMMARIES	QΙ	S43376	S06763	JH0819	A37047	A34154	836799	JH0795	A56637	S71343	A32507	S29130	S29129	A48573	S25851	T14554	T05703	T05705	S58170	C36605	T10172	T07841	H86224	T03691	T16968	T43854	A53101	F83161	MWKW1	S50439
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de	Query Match	100.0	100.0	100.0	100.0	100.0	100.0	93.4	88.7	85.8	80.1	79.5	79.5	74.2	63.9	6.09	55.6	55.6	55.0	55.0	54.3	53.0	52.3	50.3	50.3	35.8		35.1		33.8
	Score	151	151	151	151	151	151	141	134	125	121	120	120	112	96.5	92	84	84	83					9/			53	53	52	51
	Result No.	г	7	m	4	2	9	7	æ	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29

Calrettculin precursor - mouse
N;Alternate names: 55K calcium-binding reticuloplasmin; calregulin
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: S06763; JC1444; PC1233; A57498
R;Smith, M.J.; Roch, G.L.E.
EMBO J. 8, 3581-3586, 1989
A;Title: Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a
A;Reference number: S06763; MUID:90059955
A;Molecule type: DNA

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Gaps

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Length 400; Indels

100.0%; Score 151; DB 2; 100.0%; Pred. No. 3.5e-14; Mismatches

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Conservative

Best Local Similarity Matches 27; Conserv

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Query Match

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LJMSNG	IJBONC	IJRTNC	IJCHNL	INSWI	JX0256	H69774	C84983	A31494	B31494	B31875	A31875	G69414	JW0053	S40938
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725	761 853	828	1091	1115	877	88	359	1765	1765	1766	1766	183	369	619
33.8	33.8	33.8	33.8	33.8	32.5	32.1	32.1	32.1	32.1	32.1	32.1	31.8	31.8	31.5
51	51	51	51	51	49	48.5	48.5	48.5	48.5	48.5	48.5	48	48	47.5
30	32	33	34	35	36	37	38	36	40	41	42	43	44	45

## ALIGNMENTS

RESULT

```
A Molecule type: protein
A Residues: 1-400 < MATA>
A Residues: 1-400 < MATA>
A Experimental Source: brain
B Liu, N.; Fine, R.E.; Johnson, R.J.
Biochim. Biophys. Acta 1202, 70-76, 1993
A Title: Comparatison of CDNAs from bovine brain coding for two isoforms of calreticuli
A Reference number: $36799; MUID:93385184
A Accession: $36801
A Status: nucleic acid sequence not shown
calreticulin, brain isoform 1 - bovine
C;Species: Bos primigenius taurus (cattle)
C;Species: Bos primigenius taurus (cattle)
C;Date: 20-0ct-1994 #sequence_revision 23-Mar-1995 #text_change 07-May-1999
C;Accession: S43376; S36801
R;Matsuoka, K.; Seta, K.; Yamakawa, Y.; Okuyama, T.; Shinoda, T.; Isobe, T.
Biochem. J. 298, 435-442, 1994
A;Fitle: Covalent structure of bovine brain calreticulin.
A;Reference number: S43376; MUID:94183174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Superfamily: calreticulin
C;Superfamily: calcium binding; glycoprotein
F;397-400/Region: endoplasmic reticulum retention signal
F;120-146/Disulfide bonds: #status experimental
F;162/Binding site: carbohydrate (Asn) (covalent) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Experimental source: brain, clone 8.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 45-63,'E',65-83 <LIU>
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137 CGPGTKKVHVIFNYKGKNVLINKDIRC 163
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Matches 27; Conserv
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                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary
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Highlits

Nighternate names: calcium-binding protein 3

Nighternate names: calcium-binding protein 3

Siprciaes Ratius norvegicus (Norway ret)

C;Species Ratius norvegicus (Norway ret)

C;Species Ratius norvegicus (Norway ret)

C;Species Ratius norvegicus (Norway ret)

C;Accession: 140819; As40176; Silvision 200-40-1994 *text_change 20-Jun-2000

C;Accession: 140819; As40176; Silvision 200-500; Source 200-500; Source 200-500; Inchiaga, S. Kxp.

Call Ross 205, 101-110, 1993

A;Title: An endoplasmic reticulum protein, calreticulin, is transported into the acrosom A;Title: An endoplasmic reticulum protein, calreticulin, is transported into the acrosom A;Title: An endoplasmic reticulum protein, calreticulin, is transported into the acrosom A;Reteronce number: A49176; MUD:93202172

A;Accession: A49176

A;Revidumes: 1-416 cana,
A;Accession: A49176

A;Accession: A40176

A;Acc
Accession: PC133

Accessive references: EMBL:X14926; NID:950567; PIDN:CAA33053.1; PID:950568

R; Marzarella, R.A.; Gold, P.; Cunningham, M.; Green, M.

Green 120, 217-225, 1992

A; Till betermination of the sequence of an expressible cDNA clone encoding ERp60/calre

A; Reference number: JC1444

A; Reference number: JC1444

A; Recentland: JC1444

A; Reference number: JC1444

A; Reference num
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A; Mealduns: 18-41 <MA2>
R; Maite, T.K.; 2hu, Q.; Tanzer, M.L.
B; Hall. Chem. 270, 15926-15929, 1995
A; Title: Chem. 270, 15926-15929, 1995
A; Krérence number: A57498; MUD: 95332280
A; Accession: A57498
A; Status: preliminary
A; Molecula type: protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Residuces: 74-80;142-151;186-193 <WH1>
C; Superfamily: calreticulin
C; Keywords: calcium binding
F;1-17/Domain: signal sequence *status predicted <SIG>
F;1-17/Pomain: signal sequence *status experimental <MAT>
F;18-416/Product: calregulin *status experimental <MAT>
F;413-416/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
100.0%; Score 151; DB 1;
Best Local Similarity 100.0%; Pred. No. 3.6e-14;
Matches 27; Conservative 0; Mismatches 0;
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kweidue: 74-80:142-151;186-193 <WHI>
Superfamily: calreticulin
Keywords: calcium binding
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calreticulin precursor - human N;Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding pr C;Species: Homo sapiens (man) C;Date: 10-Sep-1999 #text_change 18-Feb-2000 C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 18-Feb-2000 C;Accession: A42330; A37047; A46452; A28812; PH1525; A40346; S11475; T45075 F;McCauliffe, D.P.; Yang, Y.S.; Wilson, J.; Sontheimer, R.D.; Capra, J.D. A;Title: The S-flanking region of the human calreticulin gene shares homology with the A;Reference number: A42330; MUID:92129342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 'R', 270-358, 'AAG' <LON>
A; Residues: 'R', 270-358, 'AAG' <LON>
A; Residues: 'R', 270-358, 'AAG' <LON>
A; Cross-references: EMBL:X13702; NID1956055; PIDN:CAA31987.1; PID:g930260
A; Note: the authors designated the protein as D-beta-hydroxybutyrate dehydrogenase
R; Yokoi, T.; Nagayama, S.; Kajlwara, R.; Kawaguchi, Y.; Horiuchi, R.; Kamataki, T.
Biochim. Biophys. Acta 1158, 339-344, 1993
A; Title: Identification of protein disulfide isomerase and calreticulin as autoimmune
A; Reference number: S39371; MUID:94072621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nitraves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M Blochem. J. 271, 473-480, 1990
A;Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor A;Reference number: S13045; MUID:91054414
A.Experimental source: testis, strain Sprague-Dawley
R.Soennichsen, B.; Fuellekrug, J.; van Nguyen, P.; Diekmann, W.; Robinson, D.G.; Mies
submitted to the EMBL Data Library, May 1994
A.Description: Retention and retrieval: both mechanisms cooperate to maintain calret1
A.Reference number: $45036
A.Accession: $45036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: protein
A;Realdues: 18-23, "X'. 25-32 < YOK>
R;Van, P.N.; Peter, F.; Soeling, H.D.
J. Biol. Chem. 264, 17494-17501, 1989
A;Title: Four infracisfernal calcium-binding glycoproteins from rat liver microsomes
iiive calcium sequestering rat liver vesicles.
A;Reference number: A34473; MUID:90008920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                      A Molecule type: mRNA
A; Residues: 1-416 <SOE>
A; Cross -references: EMBL:X79327; NID:g488840; PIDN:CAA55890.1; PID:g488841
R; Lone, Y.C.; Ballly, A.; Latruffe, N.
submitted to the EMBL Data Library, December 1988
A; Reference number: S04867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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C; Keywords: calcium binding; glycoprotein
E;1-17/Domahn: signal sequence #status predicted <SIG>
F;18-416/Product: calreticulin #status experimental <MAT>
F;204-212/Region: unclear location signal
F;413-416/Region: endoplasmic reticulum retention signal
F;344/Binding site: carbohydrate (Asn) (covalent) #status predicted
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100.0%; Pred. No. 3.6e-14;
tive 0; Mismatches 0;
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100.0%;
                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Superfamily: calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: protein A; Residues: 19-32 <TRE>
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Best Local Similarity
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A; Residues: 1-418 <FLI>
                                Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Accession: S13047
                                                                                                       27;
                                                                                                       Matches
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A: Note: sequence extracted from NCB1 backbone (NCBIN:78537, NCBIP:78536)

A: NOte: sequence extracted from NCB1 backbone (NCBIN:78537, NCBIP:78536)

A: NOte: sequence extracted from NCB1 backbone (NCBIN:78537, NCBIP:78536)

A: NCCB1. In Invest. 85, 1379-1391, 1990

A: Richte: Molecular Cloning, expression, and chromosome 19 localization of a human Ro/SS-A: Reference number: A37047; MUD:90237213

A: Note: Lat 1.47 A: NOTE: A37047; MUD:90237213

A: Note: Le authors translated the codon GTA for residue 349 as Tyr

B: Note: Le authors translated the codon GTA for residue 349 as Tyr

B: Note: Lat 1.47 A: Note: Note: Note: A4652; MUD:92031329

A: Note: Le authors translated the autoantigen calreticulin.

A: Reference number: A4652; MUD:92031329

A: Note: Sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)

A: Note: sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)

B: Lideu T. S.: Newkirk, M. M.; Capra. J. D.: Sontheimer, R.D.

A: Reference number: A28812; MUD:38273610

A: Note: sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)

B: Lideu T. S.: Newkirk, M. M.; Capra. J. D.: Sontheimer, R.D.

A: Note: sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)

B: Lideu T. S.: Newkirk, M. M.; Capra. J. D.: Sontheimer, R.D.

A: Reference number: A28812; MUD:38273610

A: Note: sequence oxtracterization of human Ro/SS-A antigen. Amino terminal sequence of Notes 18 A: A14 A: B1 A: A14 A:
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A;Residues: 18:34,'R' <ROJ>
R;Krause, K.H.: Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
Biochem. J. 270, 545-548, 1990
A;Title: Sequence similarity of calreticulin with a Ca(2+)-binding protein that co-purif
A;Reference number: S11475; MUID:90380058
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A;Residues: 18:32 <RRA>
R;Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
Submitted to the EMBL Data Library, November 1996
A;Description: Characterization by genomic sequence analysis of a gene-rich 111 kb regic
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A. Cross-references: Embl. AD000092; PIDN: AAB51176.1

A. Cross-references: Call line 5HL2-B; fibroblast
C. Genetics: A. A. Map position: 19p13. 3-19p13. 2

A. Map position: 19p13. 3-19p13. 2

A. Introns: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3

A. Mote: CRTC
C. Superfamily: calreticulin
F. A. Mote: CRTC
C. Superfamily: Galreticulin
F. 1-17/Pomatic: Galreticulin #status predicted <AMAT>
F. 18-417/Peduct: Calreticulum retention signal
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A;Cross-references: GB:J05138; NID:g164858; PIDN:AAA31188.1; PID:g164859
R;Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M
Biochem, J. 271, 473-480, 1990
A;Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor
A;Reference number: S13045; MUID:91054414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rifliegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M. J. Biol. Chem. 264, 21522-21528, 1989
A; Title: Molecular cloning of the high affinity calcium-binding protein (calreticulin A; Reference number: A34154; MUID:90094320
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calreticulin precursor, skeletal muscle - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 10.5ep-1999 #sequence_revision 10.5ep-1999 #text_change 10.5ep-1999
C;Accession: A34154; S13047
C;Accession: A34154; Macrannan. D.H.; Reithmeier, R.A.F.; Michalak, M.
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C.Species: Bos primigenius taurus (cattle)
C.Species: 10-Dec.1993 #sequence_revision 23-Mar-1995 #text_change 13-Aug-1999
C.Species: 33600
C.Species: 33600
C.Species: 33600
C.Species: S3600
C.Species: 
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A;Cross-references: GB:L13462; NID:g348693; PIDN:AAC37307.1; PID:g348694
A;Experimental source: brain, clone 9.4
A;Accession: S36800
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E;1-34/Domain: signal sequence #status predicted <SIG>
F;1-34/Domain: signal sequence #status predicted <MAT>
F;35-421/Product: calreticulin, brain isoform 2 #status predicted <MAT>
F;418-421/Region: endoplasmic retriculum retention signal
F;411-167/Disulfide bonds: #status predicted
F;183/Binding site: carbohydrate (Asn) (covalent) #status predicted
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             Length 417;
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F;1-17/Domain: signal sequence #status predicted <SIG>
F;415-418/Region: endoplasmic reticulum retention signal
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Score 151; DB 1;
Pred. No. 3.6e-14;
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                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                    137 CGPGTKKVHVIFINYKGKNVLINKDIRC 163
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41K larval antigen - nematode (Onchocerca volvulus) (fragment)
C;Species: Onchocerca volvulus
     A;Note: sequence extracted from NCBI backbone (NCBIN:128274, NCBIP:128275)
R;McCauliffe, D.P.; Zappi, E.; Lieu, T.S.; Michalak, M.; Sontheimer, R.D.; Capra, J.D.
J. Clin. Invest. 86, 332-335, 1990
A;Tille: A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly h
A;Reference number: A37158; MUID:90307981
A;Accession: A37158
                                                                                                                                                                                                                                                                                                                  A; Status: preliminary; nucleic acid sequence not shown; not compared with conceptual
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C; Reywords: calcum binding; endoplasmic reticulum
C; Reywords: calcum binding; endoplasmic reticulum
F; 1-18/Domain: signal sequence #status predicted AMT>F; 1-18/Product: calreticulin #status predicted AMT>F; 205-213/Region: nuclear location signal
F; 415-418/Region: endoplasmic reticulum retention signal
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C;Date: 29-Jan_1998 *sequence_revision 13-Feb-1998 *text_change 20-Jun-2000
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                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 91-105,'A',107,109-124;182-183,'L',185-220 <MCC>
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Keywords: calclum binding; endoplasmic reticulum F;1-17/Domain: signal sequence #status predicted <SIG>F;403-406/Region: endoplasmic reticulum retention signal
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Pred. No. 1e-11;
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FEBS Lett. 387, 27-32, 1996
A;Itle: Calnexin: its molecular cloning a
A;Reference number: S71342; MUID:96234004
A;Accession: S71343
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88.9%;
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Best Local Similarity 88.9°
Matches 24; Conservative
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A; Residues: 1-336 <UNN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Introns: 65/1; 222/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Gene: FlyBase:Crc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alternate names: protein 407
C; Species: Aplysia californica (California sea hare)
C; Species: App. 1999
S; Saladoj; F60977
N; Kennedy, T.E.; Kuhl, D.; Barzilai, A.; Sweatt, J.D.; Kandel, E.R.
N; Kennedy, T.E.; Kuhl, D.; Barzilai, A.; Sweatt, J.D.; Kandel, E.R.
A; Title: Long-term sensitization training in aplysia leads to an increase in calreticuli A; Reference number: JH0795
A; Accession: JH0795
A; Residues: 1-405
A; Residues: 1-405
A; Residues: 1-405
A; Residues: 1-405
A; Reperimental source: abdominal ganglion and antral nervous system
B; Reinnedy, T.E.; Gawhinowicz, M.A.; Barzilai, A.; Kandel, E.R.; Sweatt, J.D.
Proc. Natl. Acad. Sci. U.S.A. 85, 7008-7012, 1988
A; Title: Sequencing of proteins from two-dimensional gels by using in situ digestion and A; thon in Aplysia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Calreticulin homolog precursor - fruit fly (Drosophila melanogaster)
N'Alternate names: Ro/SS-A autoantigen/calreticulin homolog
C;Spretins Drosophila melanogaster
C;Spretins Drosophila melanogaster
C;Date: 11-Aug-1995 #sequence_revision 11-Aug-1995 #text_change 13-Aug-1999
C;Date: 11-Aug-1995 #sequence_revision 11-Aug-1995 #text_change 13-Aug-1999
R;Smith, M.J.
DNA Seq: 3, 247-250, 1992
A;Title: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticulin A;Reference number: A56637; MUID:93208374
A;Accession: A56637
A;Status: preliminary
A;Accession: DNA
A;Acuston: D
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A;Accession: B31409
A;Molecule type: protein
A;Molecule type: protein
A;Residues: 'X',17-28,'X',30-31 <KE2>
R;Sweatt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, K Electrophoresis 10, 152-157, 1989
A;Tile: Development of a database of amino acid sequences for proteins identified and A;Reference number: A60977; MUID:89276264
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                                                         Length 421;
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A.Molecule type: protein
A:Westdues: 'X',17-28, 'X',30-31 <SWE>
A:Westdues: 'X',17-28, 'X',30-31 <SWE>
C:Superfamily: caireticulin
C:Keywords: calcium binding; endoplasmic reticulum
F):1-15/Domain: signal sequence *status predicted <SIG>F):16-405/Product: caireticulin *status experimental <AMT>
F):402-405/Region: endoplasmic reticulum retention signal
                                              Score 151; DB 2;
Pred. No. 3.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93.4%; Score 141; DB 1;
88.9%; Pred. No. 9.9e-13;
100.0%; Scor.
100.0%; Pred. No. 3...
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           calreticulin precursor - California sea hare
                                                                                                                                                                                                                                                                                                             141 CGPGTKKVHVIFNYKGKNVLINKDIRC 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                    1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                             Best Local Similarity 100.
Matches 27; Conservative
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Best Local Similarity 88.9
Matches 24; Conservative
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C;Species: Schistosomā mansoni
C;Date: 10.Sep-1999 #sequence_revision 10.Sep-1999 #text_change 10.Sep-1999
C;Accession: A48573
R;Khalife, J; Trottein, F.; Schacht, A.M.; Godin, C.; Pierce, R.J.; Capron, A.
Mol. Blochem. Parasitol. 57, 193-202, 1993
A;Title: Cloning of the gene encoding a Schistosoma mansoni antigen homologous to hum
A;Reference number: A48573; MUID:93165070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Seq. 2, 235-240, 1992
A/Fille: A C. elegans gene encodes a protein homologous to mammalian calreticulin.
A/Feference number: 825851; MUID:92329978
A/Accession: 825851
A/Fetus: preliminary
A/Fetus: preliminary
A/Fetus: preliminary
A/Fetus: DNA
A/Fetus: DNA
A/Fesidues: 1-395 <SMI>
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A;Experimental source: strain Bristol N2; clone Y38A10A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                calreticulin precursor - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Bate: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
C;Accession: S25851; T33996
R;Smith, M.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A Molecule type: mRNA
A;Residues: 1-393 < KHA>
A;Cross-references: GB:M93097; NID:g160928
A;Note: sequence inconsistent with the nucleotide translation
A;Note: sequence extracted from NCBI backbone (NCBIN:125085, NCBIP:125086)
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F;1-15/Domain: signal sequence #status predicted <SIG>
F;392-395/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Superfamily: calreticulin
F;1-16/Domain: signal sequence #status predicted <SIG>
F;390-393/Region: endoplasmic reticulum retention signal
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A;Molecule type: DNA
A;Residues: 1-395 <BAU>
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                                         13 CGMATKKVHVIFNYKGKNHLIKKEIPC 161
       27
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       1 CGPGTKKVHVIFNYKGKNVLINKDIRC
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Matches 21; Conservative
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Matches 18; Conservative
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A;Gene: CESP:Y38A10A.5
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A; Status: preliminary
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s29129
calreticulin precursor (clone 3) - African clawed frog (fragment)
C; Species: Xenopus laevis (African clawed frog)
C; Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C; Accession: 529129
R; Treves, S; Zorzato, F; Pozzan, T.
Biochem. J. 287, 579-581, 1992
A; Title: Identification of calreticulin isoforms in the central nervous system. A; Reference number: S29129; MUID:93074997
A; Accession: 329129
A; Molecule type: mRNA
A; Residues: 1-411 - TRRE>
A; Cross - references: EMBL:X67597; NID:964608; PIDN:CAA47866.1; PID:964609
C; Superfamily: calreticulin
C; Keywords: 91vcoprotein
F; 1-12/Domain: signal sequence (fragment) #status predicted <SIG>F; 1-12/Domain: signal sequence (fragment) #status predicted <AMT>F; 408-411/Region: endoplasmic reticulum retention signal
F; 339/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Calreticulin (clone 8) - African clawed frog (fragment)
C;Species: Xenopus laevis (African clawed frog)
C;Species: Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Accession: S29130; T01068
R;Treves, S.; Zorzato, F.; Pozzan, T.
Biochem. J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous system. A;Reference number: S29129; MUID:93074997
A;Accession: S29129; MUID:93074997
A;Accession: S29129; MUID:93074997
A;Residues: 1-384 4TRE>
A;Cross-references: EMBL.X67598
A;Accession: T01068
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A;Accession: Close A;Accession: Clos
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 384;
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                                         Score 121; DB 2; Lencard No. 6.5e-10;
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Pred. No. 1e-09;
1; Mismatches
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3; Mismatches
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                                                                                                                                                                                                                                                      1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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                                                                                                      Query Match 80.1%;
Best Local Similarity 77.8%;
Matches 21; Conservative
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Best Local Similarity 81.5%;
Matches 22; Conservative
C; Superfamily: calreticulin
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RESULT 15
T14554
cualreticulin - beet
C.Spreticulin - 14554
C.Spretick, R. Hubmitted to the EMBL Data Library, October 1997
R.Ylercek, R. Hubmitted to the EMBL Data Library, October 1997
A.Spreticulin - 14554
A.Screticulin - T14554
A.Scretic
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Search completed: January 9, 2002, 15:02:03 Job time: 190 sec

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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OM protein - protein search, using sw model

January 9, 2002, 15:12:14 ; Search time 25.18 Seconds (without alignments) 88.823 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-828-000-4 340 1 TDMHGDSEYNIMFGPDICGP.....IRCKDDEFTHLYTLIVRPDN 61

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 seqs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	P27797 home	ú	P14211 mus musculu		P15253 oryctolagus		P29413 drosophila	_	Q06814 schistosoma		Q9std3 chlamydomon		Q9xf98 prunus arme			004151 arabidopsis					berberis s	Q9zny3 euglena gra	Q9sp22 zea mays (m	Q39817 glycine max		P35564 mus musculu	P35565 rattus norv	643		9	552	09 pisu	P52194 mus musculu
SUMMARIES	ID	<u> </u>	CRT1_BOVIN	CRTC_MOUSE	CRTC_RAT	CRTC_RABIT	CRT2_BOVIN	CRTC_DROME	RAL1_ONCVO	CRTC_SCHMA	CRTC_CAEEL	CRTC_CHLRE	CRTC_BETVU	CRTC_PRUAR	CRTC_RICCO	CRT2_ARATH	CRT1_ARATH	CRTC_DICDI	CRTC_ORYSA	CRT3_ARATH	CRTC_NICPL	CRTC_BERST	CRTC_EUGGR	CRTC_MAIZE	CALX_SOYBN	CALX_HUMAN	CALX_MOUSE	CALX_RAT	CALX_CANFA	CAX1_ARATH	CALX_HELTU	CALX_CAEEL	CALX_PEA	CALG_MOUSE
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038798 arabidopsis 014967 homo sapien P36581 schizosacch P25201 acinetobact P39994 saccharomyc P17545 trypanosoma	P53755 saccharcomo P53755 saccharcomyc QQ4693 saccharcomyc P16094 momordica c P57459 buchnera ap
CAX2_ARATH CALG_HUMAN CALX_SCHPO MTA1_ACICA YECO_YEAST RPB1_TRYBB	KPBZ_TKTBB KN98_YEAST CALX_YEAST YME9_YEAST RIP1_MOMCH NUSA_BUCAI
528 610 560 540 540 560	1,00 489 502 1361 286 496
31.0 30.4 30.3 22.8 19.0	19.0 18.7 18.7 17.4 17.1
105.5 103.5 103 77.5 66 64.5	669 63.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5
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## ALIGNMENTS

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CRT1_BOVIN
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                                                                                                                                                                                                                                                                  Hochstrasser D.F., Frutiger S., Paquet N., Bairoch A., Ravier F., Pauquali C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas R., Appel R.D., Hughes G.J., Hughes G.J., Human liver protein map: a reference database established by microsequencing and gel comparison."; Riectrophoresis 13:992-1001(1992).
                                                                                                                                                                                                         "Mincerestrance of 145 proteins recorded in the two-dimensional gel protein database of normal human epidermal keratinocytes."; Mictrophoresis 13:960-969(1992).
                                                                                                                                                              TISSUK-Keratinocytes;
MKDLLNB-93162043; PubMed 1286667;
Kusmusson H.H., van Damme J., Puype M., Gesser B., Celis J.E.,
Vandekerckhove J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Ptum; PP00262; Calreticulin; 1.
PRINTS; PR002626; Calreticulin; 1.
PROSITE; PS00014; ER_TRRGET; 1.
PROSITE; PS00804; CALRETICULIN, 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00806; CALRETICULIN_2; 1.
PROSITE; PS00806; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CALRETICULIN.
N-DOMAIN.
P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
1-2.
                                                                                                                                                  PARTIAL SEQUENCE OF 25-34; 56-62; 208-221 AND 273-278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AD000092; AAB51176.1; -...
PIR; A37047; A37047
PIR; S11475; S11475.
PIR; A46452; A46452.
SWISS-2DPAGE; P3777; HUMAN.
HSC-2DPAGE; P27797; HUMAN.
MIM; 109091; -...
                                                      MEDLINE -93162045; Pubmed :1286669;
         Biochem. J. 270:545-548(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M84739; AAAS1916.1; -.
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                                SKOUENCE OF 18-28.
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cells.";
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"Covalent structure of bovine brain calreticulin.";

"Covalent structure of bovine brain calreticulin.";

Biochem. J. 298.435-442(1994).

"In September of the structure of bovine brain calreticulin.";

"Covalent J. 298.435-442(1994).

"In September of the structure of bovine brain calreticulin. THERE ARE BOTH HIGH AND LOW APPINITY CALCIUM-BINDING STES.

"I- SUBJULIAR LOCATION: ENDOPLASMIC RETICULIN FAMILY."

"In Leptor; IPRO01866; Calreticulin."

"In therPro; IPRO0265; Calreticulin."

"In PRO0265; Calreticulin."

"IN PROSITE; PS00003; Calreticulin.]

"IN PROSITE; PS00003; Calreticulin.]

"IN PROSITE; PS00004; Calreticulin.];

"IN PROSITE; PS000065; Calreticulin.];
                                                                                                                                                                                                                         120 TDMHGDSEXNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 179
                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                    01-0cT-1996 (Rel. 34, Created)
01-0cT-1996 (Rel. 34, Last sequence update)
01-0cT-1996 (Rel. 34, Last annotation update)
01-0cT-1996 (Rel. 34, Last annotation update)
CALRETICULIN, BRIN ISOFORM I (CRP55) (CALREGUIN) (HACBP).
BOS taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bovidae; Bovinae; Bos.
1001-TaxID-9913;
                                                                                                                                                                                                            1 TOMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
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                                                                                                                                                          Length 417;
                                                                                                                                                                                     0; Indels
                                                              ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
                                                                                                      MISSING (IN REF. 3).
BC37C3C0F1054FB2 CRC64;
 1-4.
3 X APPROXIMATE REPEATS.
2-1.
2-2.
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                                                                                                                                                          Score 340; DB 1;
Pred. No. 3.4e-34;
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100.0%; Pred. No. ...
0; Mismatches
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P-DOMAIN.
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                                                                                                                  48141 MW;
                                                                                                                                                                                     61; Conservative
                                                                                                                                                                                                                                                                                                                                                        STANDARD;
 255
297
269
283
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408
417
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259
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273
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137
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417 AA;
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Best Local Similarity
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174
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P52193;
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DOMAIN
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SWISS-2DPAGE; P14211; MOUSE
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                                                                                                          103 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKCKNVLINKDIRCKDDEFTHLYTLIVRPN 162
                                                                              Gaps
                                                                                               1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                            MEDINE-93013037; PubMed-1398135;
Mazzarella R.A., Gold P., Cunningham M., Green M.;
"Determination of the sequence of an expressible cDNA clone encoding
ERp60/calregulin by the use of a novel nested set method.";
Gene 120:217-225(1992).
                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN-BALB/C; TISSUE-Liver;
MEDLINE-90059955; PubMed-2583110;
Smith M.J. Koch G.L.E.;
"Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a major calcium binding ER/SR protein.";
EMBO J. 8:3581-3586(1989).
           N-LINKED (GLCNAC. ..).
PREVENT SECRETION FROM ER (POTENTIAL).
7D4B68DFC689EEFI CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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01-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
                                                         Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                        98.5%; Score 335; DB 1; 98.4%; Pred. No. 1.3e-33; iive 1; Mismatches 0;
                                                                                                                                                                                                             416 AA
                                                                                                                                                                                                             PRT;
146
162 N-
400 PF
46381 MW;
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                                                        Query Match 98.5
Best Local Similarity 98.4
Matches 60; Conservative
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                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
120
162
397
400 AA;
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JC1444; JC1444.
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P14211;
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121 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYGKKNVLINKDIRCKDDEFTHLYTLIVRPDN 180
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Exp. Cell Res. 205:101-110(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
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MEDLINE-93202172; Pubmed-8453984;
Nakamura M., Moriya M., Baba T., Michikawa Y., Yamanobe T., Arai K.,
Okinaga S., Kobayashi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           918418; P10452;
01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (CALBP)
(CALCIUM-BINDING PROTEIN 3) (CABP3).
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STRAIN-SPRAGUE-DAWLEY; TISSUE-Brain cortex;
MEDLINE-90370496; PubMed=2395661;
MUNITHY K.K., Banville D., Srikant C.B., Carrier F., Bell A., Holmes C., Patel Y.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.5%; Score 335; DB 1; Length 416; 100.0%; Pred. No. 1.4e-33; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                      Endoplasmic reticulum; Calcium-binding; Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PREVENT SECRETION FROM ER. 24C03B0091340BD8 CRC64;
                                                                                                                                                                                                                                                                                                       C-DOMAIN.
4 X APPROXIMATE REPEATS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASP/GLU/LYS-RICH.
MGD; MGI:88252; Calr.
InterPro: IPR001580; Calreticulin.
InterPro: IPR001580; Calreticulin.
PRINTS: PR00262; Calreticulin.
PRODOSE; Calreticulin.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00003; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.2; 1.
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                                                                                                                                                                                                                                               CALRETICULIN.
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P-DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 163
                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 60; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    416 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [2]
SEQUENCE FROM N.A.
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198
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DISULFID
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PROSITE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the Ruropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitive requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                        Treves S., de Mattel M., Lanfredi M., Villa A., Green N.M., Muclennan D.H., Meldolesi J., Pozzan T.;
Kalreticulin is a candidate for a calsequestrin-like function in Cu2(+)-storage compartments (calciosomes) of liver and brain."; Blochom. J. 271:473-480(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          autolmmune antigons in LEC strain of rats.;
Blochim. Biophys. Acta 1158:339-344(1993).
Libertion: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW APPINITY CALCIUM-BINDING SITES.
-!- SUBUNIT: WONOMER (BY SIMILARITY).
-!- SUBUNIT: WONOMER (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
-!- CAUTION: WAS ORIGINALLY (REF. 2) THOUGHT TO BE D-BETA-
HYDROXYBUTYRATE DEHYDROGENSE.
                       STRAIN SPRAGUE-DAWLEY; TISSUE Liver; MEDLINE-9181573; PubMed 7876339; Socunitasen B., Fuellekrug J., van Nguyen P., Diekmann W., Robinson D.G., Mieskos G.; Robinson D.G., Mieskos G.; Retention and retrieval: both mechanisms cooperate to maintain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Identification of protein disulfide isomerase and calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 18-32.
STRAIN LEC. TISSUE LIVEY.
MEDILINE 94072621: Pubmed-8251535;
ZOKOI T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi R.,
                                                                                                                                                                                                                                                                                                                    STRAIN-SPRAGUE-DAWLEY; TISSUE Testis;
MEDINE-92360010; PubMed-1497655;
Makamura M., Michikawa Y., Baba T., Okinaga S., Arai K.;
"Culreticulin is present in the acrosome of spermatids of rat
                                                                                                                                            STRAIN SPRAGUE-DAWLEY;
Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                      Biochem. Biophys. Res. Commun. 186:668-673(1992)
                                                                                           calreticulin in the endoplasmic reticulum.";
J. Cell Sci. 107:2705-2717(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PRO0626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN; 1.
PROSITE; PS00014; PR.TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
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InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
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KMHL; X53363; CAA37446.1; -.
KMHL; X13702; CAA31987.1; ALT_SEQ.
KMBL; X79327; CAA55890.1; -.
                                                                                                                                                                                                                MEDLINE-91054414; PubMed:2241926;
                                                                                                                                 SEQUENCE OF 270-358 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR, S11205, S11205.
PIR, S13045, S13045.
PIR, A49176, A49176.
PIR, S45036, S45036.
PIR, JH0819, JH0819.
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             SEQUENCE FROM N.A
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Fliegel L., Burns K., Maclennan D.H., Reithmeier R.A.F., Michalak M., "Molecular cloning of the high affinity calcium-binding protein (calreticulin) of skeletal muscle sarcoplasmic reticulum."; J. Biol. Chem. 264:21522-21528(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treves S., de Mattei M., Lanfredi M., villa A., Green N.M., Maclennan D.H., Meldolesi J., Pozzan T.; "Calreticulin is a candidate for a calsequestrin-like function ica2(+)-storage compartments (calciosomes) of liver and brain."; Biochem. J. 271:473-480(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
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TISSUE-Fast-twitch skeletal muscle;
MEDLINE-91282795; PubMed=2059224;
Fliegel L., Michalak M.;
"Fast-twitch and slow-twitch skeletal muscles express the same isoform of calreticulin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 18-46.
MEDLINE-91201375; PubMed-2016321;
Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie
Vance J.E., Opas M., Michalak M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
                                                                                                                                                                                                                                                                                                                                                                                                  Length 416;
                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                  Calcium-binding; Repeat; Signal
                                                                                                                                                                                                                                                                                                                           PREVENT SECRETION FROM ER. 2E6713CED31A2970 CRC64;
                                                                                                                           4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                    X APPROXIMATE REPEATS
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                                                                                                                                                                                                                                                                                                                                                                                                  Score 335; DB 1;
Pred. No. 1.4e-33;
                                                                                                                                                                                                                                                                                       ASP/GLU/LYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                 98.5%; Sco...
100.0%; Pred. No. ...
... 0; Mismatches
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                                                                                                                                                                                                                                                                                                          BY SIMILARITY
                                                      CALRETICULIN
 CALRETICULIN_REPEAT; 3.
                                                                       N-DOMAIN.
P-DOMAIN.
                                                                                                       C-DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE.Slow-twitch skeletal muscle;
MEDLINE=90094320; PubMed~2600080;
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                                                                                                                                                                                                                                                                                                                                             47995
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                reticulum;
1 17
                                                                   Query Match
Best Local Similarity
Matches 60; Conserv
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PS00805;
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                  Endoplasmic
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P15253;
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                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                     DOMAIN
                                   SIGNAL
                                                                       DOMAIN
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01-NOV-1995 (Rel. 32, Last sequence update) 15-JUL-1998 (Rel. 36, Last annotation update) CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).

(Rel. 32, Created)

01-NOV-1995 ( 01-NOV-1995 ( 15-JUL-1998 ( CRT2_BOVIN P42918;

STANDARD;

CRT2_BOVIN

421 AA

Bos taurus (Bovine). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;

Bovidae; Bovinae; Bos.

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                                                                                    TISSUE-Lung;
MEDLINE-9200238; PubMed-1911780;
Guan S., Falick A.M., Williams D.E., Cashman J.R.;
Guan S., Falick A.M., Williams D.E., Cashman J.R.;
Faridence for complex formation between rabbit lung flavin-containing monooxygenase and calreticulin.";
Biochemistry 30:9892-9900(1991).

-I. FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.

-I. SUBURIT: MONOMER (BY SIMILARITY).

-I. SUBGELLUAR LOCATION: ENDOPLASHIC RETICULUM LUMEN.
"Calreticulin, and not calsequestrin, is the major calcium binding protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Endoplasmic reticulum; Calcium-binding; Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -> T (IN REF. 5).
B6082B689DC763A6 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00014; ER TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
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C-DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                               DR PIR, C33208; C33208.

R PIR, D33208; D33208.

R PIR, E33208; E33208.

R PIR, E33208; E33208.

R PIR, S13045; S13046.

R PIR, S13047; S13047.

3 InterPro; IPR001886; Ex_target.

R Pfam; PF00262; calreticulin; I. PRINTS: PR00626; CALRETICULIN.

ProDom; PD001866; Calreticulin; I. PRODom; PD001866; Calreticulin; I. PRNTS: PR00626; CALRETICULIN.

PROSTITE; PS00014; ER_TARGET. I PROCETE: CALRETICULIN.
                                          Biol. Chem. 266:7155-7165(1991)
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308
418
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418 AA;
                                                                        PARTIAL SEQUENCE.
                              reticulum
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DISULFID
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CALRETICULIN, BRAIN ISOFORM

X APPROXIMATE REPEATS

X APPROXIMATE REPEATS

ASP/GLU/LYS-RICH. BY SIMILARITY.

DOMAIN DISULFID CARBOHYD

Calcium-binding; Repeat; Signal.

POTENTIAL N-DOMAIN P-DOMAIN C-DOMAIN

Endoplasmic reticulum; SIGNAL 1 34

DOMAIN

CHAIN

DOMAIN DOMAIN DOMAIN REPEAT REPEAT

DOMAIN REPEAT REPEAT REPEAT REPEAT REPEAT

PERMY PROUSES; Calreticulin; 1.
PRINTS; PROUGES; CALRETICULIN.
PRODOM; PROUBES; CALRETICULIN.
PROSITE; PS000014; ER_TRAGET; 1.
PROSITE; PS00803; CALRETICULIN.1; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.

InterPro; IPR001580; Calreticulin. InterPro; IPR000886; ER_target.

EMBL; L13462; AAC37307.1;

Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBUNIT: MONOMER (BY SIMILARITY).

-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of

MEDLINE=93385184; PubMed=8373827;

calreticulin.";

SEQUENCE FROM N.A. NCBI_TaxID=9913;

TISSUE-Brain;

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N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
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                                                                                                                                                                                                                    Score 335; DB 1; Length 421;
Pred. No. 1.4e-33;
1; Mismatches 0; Indels
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98.4%;
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Best Local Similarity
                                                                                                                                                                                                            421 AA;
                                                                                                                                                                                                           SEQUENCE
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Gaps

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Length 418;

98.5%; Score 335; DB 1; Length 41 100.0%; Pred. No. 1.4e-33; Live 0; Mismatches 0; Indels

Conservative

Query Match Best Local Similarity Matches 60; Conserv

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121 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 180

DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61

Gaps

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A Maunatidge P.C., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
A Maunatidge P.C., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
R. Atton G.G., Wortwas S.E., Richards S., Ashburner M., Henderson S.N.,
R. Button G.G., Wortwan J.R., Yandell M.D., Zhang O., Chen L.X.,
A Marin J.F., Rogers Y.-H.C., Blazel R.G., Channe M., Mikhos G.L.G.,
A Maril J.F., Agbuyani A., An H.-J., Andrews Pfannach C.R., Mikhos G.L.G.,
Bullow R.M., Benos P.V., Barach R.G., Channe M., Debasiey E.M.,
Bullow R.M., Benos P.V., Barach R.C., Baracher D., Bolbhakov S.,
Bullow R.M., Benos P.V., Burman B.P., Bhandari D., Bolbhakov S.,
Bullow R.M., Benos P.V., Burman B.P., Bhandari D., Bolbhakov S.,
R. Burtis R.C., Busam D.A., Buller H., Caddeu E., Center A., Chadra I.,
R. Charry J.M., Cawley S., Dahlke C., Davanoport L.B., Davies P.,
R. Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dow I., Dies Z.M.
A de Publos B., Delcher A., Domes M., Dugan-Rocha S., Dow I., Dies Z.M.
R.A. Godfer C., Gabriellan A.E., Garg M.S., Gelbart W.M., Glasser K.,
A Glodf A., Goorf F., Garry M.S., Gelbart W.M., Glasser K.,
A Harris M.L., Harvey D., Helman T.J., Herrandez J.R., Rouck J.,
A Liu X., Mattei B., McInton T.J., Herrandez J.R., Rockey J.,
A Liu X., Mattei B., McInton T.J., Holm M.-H., Ibegwam C.,
A Liu X., Mattei B., McInton T.J., Hell M.-H., Ibegwam C.,
A Liu X., Mattei B., McInton R.S., Poly M.,
R. Merkulov G., Milshina M.V., Mobarry C., Morris J., Moshrefi A.,
Spier K., Spadling A.C., Stappen G.H., Re. Scheeler F., Shen H.,
Spier K., Stadling A.C., Stappen M., Strong R., Pacleb J.M.,
Railaxolo M. Pittama G.S., Pen S., Pollard J., Wang X.,
Hanger L.Y., Wassarman D.A., Weinstock M., Weissenber J.,
Railaxolo M., Pittama G.S., Pen S., Pollard J., Wang X.,
Halliams S.M., Woodage T., Stappen M., Strong R., Wassenber J.,
Railaxolo W. Bassarman D.A., Weinstock J.,
Railang S.H., Woodage T., Stappen M., Strong C., Zhao Q., Zhao Q., Zhao G., Zhao M., Watter J., Watter S., Wulls M., Weinston M., Weinston M., Watter S., Wulls M
                                                                                                                                                                                                                                                       CALMETICLE...
CRC CG9429.
CRC OR CG9429.
CRC OR CG9429.
CRCBOPALLA melanogaster (Fruit fly).
CRUBARYOTA: Metazoa; Arthropoda; Trachesta; Hexapoda; Insecta;
CRUBARYOTA: Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
           124 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPN 183
                                                                                                                                                                                                                                                                                                                                                                                                                             CRTC_DROME STANDARD; PRT; 406 AA. P29413; 09VHA3; D1-APR-1993 (Rel. 25, Created) 01-CCT-1993 (Rel. 27, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-20196006; PubMed 10731132;
                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE-93208374; Pubmed-1296819;
                                                                                                                                                                                                                                                                                                                                                                                                                                              culreticulin homologue."
DNA Seq. 3:247-250(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN BERKELEY
                                                                                                                                                                                                                                                                                                                                                                                                                Smith M.J.;
                                                                                         184 N 184
                                                           61 N 61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 TDMHGESPYEIMFGPDICGPGTKKVHVIFSYKGKNHLISKDIRCKDDVYTHFYTLIVRPD 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                "A human Ro/SS-A autoantigen is the homologue of calreticulin and is
SEQUENCE OF 91-124 AND 182-220.
MEDLINE-90307981; PubMed-2365822;
McCauliffe D.P., Zappl E., Lieu T.S., Michalak M., Sontheimer R.D.,
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SEQUENCE FROM N.A.

BOLLINE-2441871, PubMed-7520419;

ROKeach L.A., Zimmerman P.A., Unnasch T.R.;

"Epitopes of the Onchocerca volvulus RAL1 antigen, a member of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Fllarioldea;
Onchocercidae; Onchocerca.
NCBI_TaxID::6282;
                                                                                                                     highly homologous with onchocercal RAL-1 antigen and an aplysia 'memory molecule'.";
J. Clin. Invest. 86:312-335(1990).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        406 CALRETICULIN.
107 G -> A (IN REF. 3).
184 V -> L (IN REF. 3).
46808 MW, 65D72C69D08EC427 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUL-1989 (Rel. 11, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-ROT-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
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4; Mismatches
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PIRsuse; PBG00005585; Crc.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_terget.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00262; calreticulin; 1. PRNIN'S; PR00626; CALRETICULIN. PRODOM; PD001866; Calreticulin; 1. PROSITE; PS00014; ER_TARGET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X64461; CAA45791.1; -. EMBL; AE003683; AAF54416.1; -
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Best Local Similarity 85.27
Matches 52, Conservative
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107
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406 AA;
                                                                               Capra J.D.;
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P11012;
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Khalife J., Trottein F., Schacht A.-M., Godin C., Pierce R.J.,
                         "Cloning of the gene encoding a Schistosoma mansoni antigen
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                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ib-sib.ch).
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                                              SEQUENCE OF 53-388 FROM N.A.
MEDLINE-8827354; Dubmed-2455736;
Unnasch T.R., Gallin M.Y., Soboslay P.T., Erttmann K.D., Greene B.M.;
"Isolation and characterization of expression cDNA clones encoding antigens of Onchocerca volvulus infective larvae.";
J. Clin. Invest. 82:265-269(1988).
-! SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
calreticulin family of proteins, recognized by sera from patients with onchocerciasis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Platyhelminthes; Turbellarian Platyhelminths;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rhabditophora; Eulecithophora; Revertospermata; Mediofusata; Neodermata; Trematoda; Digenea; Strigeidida; Schistosomatidae; Schistosoma.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 76.8%; Score 261; DB 1; Length 388; Best Local Similarity 76.7%; Pred. No. 1.4e-24; Matches 46; Conservative 6; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9537F298A2D31CD6 CRC64;
                                                                                                                                                                                                                                                                                                                                                               RAL-1 PROTEIN.
4 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                         1-4.
3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARG/LYS-RICH (BASIC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRTC_SCHMA STANDARD; PRT; 393 AA. 006814, 026562; Created) 01-UNN-1994 (Rel. 39, Last sequence update) 01-FEB-1996 (Rel. 33, Last sequence update) 01-NOY-1997 (Rel. 35, Last annotation update) CALRETICULIN PRECURSOR (SM4 PROTEIN) Schistosoma mansoni (Blood fluke).
                                                                                                                                                                                                                                            PIR; A32507, A32507.
InterPro; IPR001580; Calreticulin.
Pram. PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM: P0001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.2; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY
                                                                                                                                                                                                                                                                                                                             PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Calcium-binding; Repeat; Antigen; Signal.
SIGNAL 17
                          Infect. Immun. 62:3696-3704(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN-PUERTO RICAN;
MEDLINE-93165070; Pubmed-8433712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MW.
                                                                                                                                                                                                                                    EMBL; M20565; AAA59056.1; -.
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253
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200
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236
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267
281
295
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SEQUENCE
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InterPro; IPRO01580; Calreticulin.
InterPro; IPRO01586; Extraget.
Pfam: PF00262; Calreticulin: 1.
PRINETS; PRO0656; Calreticulin: 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN. 1; 1.
PROSITE; PS00804; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. REPEAT; 1.
PROSITE; PS00805; CALRETICULIN. REPEAT; 1.
SIGNAL 1 16
POTENTIAL 1.
POTENTIAL 1.
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                                                                                                                                                                                                   MOI. Biochem. Parasitol. 62:313-315(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                          [2]
SEQUENCE FROM N.A.
STRAIN-PUBERTO RICAN;
MEDIAINE-94187805; PubMed=8139623;
Khalife J., Pierce R.J., Godin C., Capron A.;
"Cloning and sequencing of the gene encoding Schistosoma mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-LINKED (GLCNAC. . .) (POTENTIAL).
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4 X 12 AA APPROXIMATE REPEATS.
11-1.
1-2.
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PREVENT SECRETION FROM ER
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MISSING (IN REF. 2).
Y -> D (IN REF. 2).
45F59857C21940D2 CRC64;
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Pred. No. 2.9e-22;
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homologous to human Ro/SS-A autoantigen.";
Mol. Biochem. Parasitol. 57:193-202(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        395
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3 X 11 A
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P27798;
01-AUG-1992 (Rel. 23, Created)
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77.68;
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EMBL; L24159; AAA19024.1;
HSSP; P00268; 4RXN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2554
2200
2220
2236
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2267
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2393
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207
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                             calreticulin."
Mol. Biochem.
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                                                                                                                                                                                                                                                                                                reinhardtii calreticulin.";
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
-!-FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!-SUBCELLOLAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!-SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PREVENT SECRETION FROM ER (POTENTIAL). DD3BA3AFFBF61C9B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Beta vulgaris (Sugar beet).

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyladons; core eudicots; Caryophylidae; Caryophyllales; Chenopodiaceae; Beta.

NCBI_TaxID-3555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chlamydomonas reinhardtii.
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
Chlamydomonadaceae; Chlamydomonas.
                                                                                                                                                                                                                                       STRAIN=137C; Zuppini A., Kaydamov C.; Zuppini A., Kaydamov C.; "Cloning and characterization of a cDNA encoding Chlamydomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 64.7%; Score 220; DB 1; Length 420; Best Local Similarity 64.9%; Pred. No. 1.5e-19; Matches 37; Conservative 10; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00803; CALRETICULN_1; 1.
PROSITE; PS00804; CALRETICULN_2; 1.
PROSITE; PS00805; CALRETICULN_REPEAT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                          (Rel. 40, Created)
(Rel. 40, Last sequence update)
(Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           416 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PRO0626; CALRETICULIN.
PROCOM; PO010186; CALTELLCULID; 1.
PROSITE; PSO01014; ER_TARGET; 1.
PROSITE; PSO0803; CALRETICULIN.1; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AJ000765; CAB54526.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-AUG-2001 (Rel. 40, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47327 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. STRAIN VV D/ZR5; TISSUE Leaf;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                   20-AUG-2001 (Rel. 40, 1
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420 AA;
                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                               NCBI_TaxID=3055;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19
                          20-AUG-2001
                                                20-AUG-2001
20-AUG-2001
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081919;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRTC_BETVU
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                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send un email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazou; Nematoda; Chromadorea; Rhabditida; Rhabditoldea;
Rhabditidae; Peloderinae; Caenorhabditis.
NCHI_TaxID-6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 DMHGDSEYNIMFGPDICGPGTKKVHVIPNYKGKNYLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                                                                                                    DNA Seq. 2:235-240(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 395;
                                                                                                                                                                                                                                                                               "A.C. elegans gene encodes a protein homologous to mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001880; Calrettculin.
InterPro; IPR000886; ER_target.
Pfam; PP00262; Calrettculin; 1.
PROMOSE; CALRETICULIN.
PROSTE; PS0001866; Calrettculin; 1.
PROSTE; PS00014; ER_TARGET; 1.
PROSTE; PS00804; CALRETICULIN_1; 1.
PROSTE; PS00805; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ER
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PREVENT SECRETION FROM ER
35CA7D2EC1D56B03 CRC64;
                                                                                                                                                                                                                                                                                                                                                           LOW AFFINITY CALCIUM-BINDING SITES.

1. SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

1. SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X APPROXIMATE REPEATS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASP/GLU/LYS-RICH.
01-AUG-1992 (Rel. 23, Last sequence update) 01-FEB-1994 (Rel. 28, Last annotation update) CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CALRETICULIN.
N-DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
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C-DOMAIN.
                                                                                                                                                                                                                  STRAIN-BRISTOL N2;
MEDLINE-92329978; Pubmed-1627827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45616 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; X59589; CAA42159.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hest Local Similarity 68.3
Matches 41; Conservative
                                                                                       Caenorhubditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                395
192
301
395
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395 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; S25851; S25851
                                                                                                                                                                                              SEQUENCE PROM N.A.
                                                                                                                                                                                                                                                                                                     calreticulin.
                                                                                                                                                                                                                                                           Smith M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
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Gaps

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REPEAT REPRAT REPEAT REPEAT REPRAT

REPEAT REPKAT 61

'Nucleotide sequence from sugar beet calreticulin.";

Viereck R.

420 AA

PRT;

STANDARD;

CRTC_CHLRE

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CKTC_CHLRE RESULT

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communis L.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRTC_RICCO
P93508;
                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRTC_RICCO
                                                                                                                                                                                                                                                                    SITE
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                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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0
                                                                                                                                                                                                   EMBL; AJ002057; CAA05161.1; -.

R Mendel; 32549; Betvu; 1166;32549.

R InterPro; IPR001580; Calreticulin.

R InterPro; IPR001886; ER_target.

R PROFICE; PR00526; CALRETICULIN.

R PROSTIE; PR001866; CALRETICULIN.

R PROSTIE; PR001866; CALRETICULIN.

R PROSTIE; PR008014; ER_TARGET; 1.

R PROSTIE; PS00804; CALRETICULIN_2; 1.

R PROSTIE; PS00804; CALRETICULIN_2; 1.

R ROSTIE; PS00805; CALRETICULIN_2; 1.

R ROSTIE; PS00804; CALRETICULIN_2; 1.

R SIGNAL

26 416 CALRETICULIN.
              -:- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-:- SUBGELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-:- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       apricot (Prunus armeniaca cv. Bergeron).";
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
--- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
--- SUBCELLULAR LOCATION: ENDOPLASMIC RETICOLUM LUMEN (BY SIMILARITY).
--- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core.eudicots; Rosidae; eurosids I; Rosales; Rosaceae; Prunus. NCBI_TaxID=36596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
565FEG3489F77CA7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN-CV. BERGERON; TISSUE-Mesocarp, and Endocarp;
Mbeguie-A-Mbeguie D., Fils-Lycaon B.R.;
"Molecular cloning and nucleotide sequence of a calreticulin from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60.9%; Score 207; DB 1; Length 416; 64.3%; Pred. No. 5.9e-18; Live 7; Mismatches 13; Indels
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT; 421 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                48136 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALRETICULIN PRECURSOR. Prunus armeniaca (Apricot).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 60.9°
Best Local Similarity 64.3
Matches 36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                               157 1
413 4
416 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRTC_PRUAR
Q9XF98;
                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                      PROSTTE; PS00014; ELTARGET; I. PROSTTE; PS00004; ELTARGET; I. PROSTTE; PS00004; CALRETICULIN.1; 1. PROSTTE; PS00004; CALRETICULIN.2; 1. PROSTTE; PS00004; CALRETICULIN.REPEAT; 2. Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ricinus communis (Castor bean).
Eukaryota: Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Malpighiales; Euphorbiaceae; Ricinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Coughlan S.J., Hastings C., Winfrey R. Jr., "Cloning and characterization of the calreticulin gene from Ricinus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . .) (POTENTIAL).
FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plant Mol. Biol. 34:897-911(1997).
-!- FUNCTION: THE RROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        129 GDTPYSIMFGPDICGYSTKKVHAILNYNNTNNLIKKDVPCETDQLTHVYTFIIRPD 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
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N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 204; DB 1; Length 421; Pred. No. 1.4e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PREVENT SECRETION FROM ER
4F5F94CBAA6C6690 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                415 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CALRETICULIN.
                                    or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL
                                                                                                                                                                                                              PRINTS; PRO0626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; Calreticulin; 1.
PRONOSC; CALRETICULIN; 1.
PRODOM; PD0001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
                                                                                        EMBL; AF134733; AAD32207.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_Larget.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE=97435975; PubMed=9290642;
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EMBL; U74630; AAB71419.1; -.
Mendel; 10452; Ricco;1166;10452.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421 AA; 48416 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 60.0%;
Best Local Similarity 62.5%;
Matches 35; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                           22
421
56
156
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5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      038858; 080486; 004152;
20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALCRILOLIN 2 PRECURSOR.
Arabidopsis thallana (Mouse-car cress).
Arabidopsis thallana (Mouse-car cress).
Eukaryotu; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-CV. COLUMBIA;
Vysotakala V.S., Schwartz J.R., Toriumi M., Yu G., Oji O., Kwan A.,
Liu S., Li J., Araujo R., Au M., Brendel V., Buehler E., Conway A.B.,
Conway A.R., Dewar K., Feng J., Kim C., Kurtz D., Li Y., Palm C.J.,
Shinn P., Sun H., Duvis R.W., Ecker J.R., Federspiel N.A.,
Submitted (NOV-1997) to the EMBL/GenBank/DDBJ databases.
PROSITE; PSO0803; CALRETICULIN_1; 1.
PROSITE; PSO0804; CALRETICULIN_2; 1.
PROSITE; PSO0805 CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
CHAIN 21 415 CALRETICULIN.
CARBOHYD 52 52 N-LINKED (GLCNAC. . .) (POTENTIAL).
CARBOHYD 152 152 N-LINKED (GLCNAC. . .) (POTENTIAL).
SARBOHYD 154 415 154 N-LINKED (GLCNAC. . .) (POTENTIAL).
SHITE 412 415 PREVENT SECRETION FROM ER (POTENTIAL).
SKOUKNCE 415 AA; 47522 MM; DD5F452E76CC7F8C CRC64;
                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-174 FROM N.A.
MEDLINE-97303616; PubMed-9159940;
Nelson D.E., Glaunsinger B., Bohnert H.J.;
Abundant accumulation of the calcium-binding molecular chaperone calrettculin in specific floral tissues of Arabidopsis thaliana.";
Plunt Physiol. 114:29-37(1997).
                                                                                                                                                                                                                                                                                                      125 GDTPYSIMFGPDICGYSTKKVHAILNYNDTNHLIKKEVPCETDQLTHVYTLVIRPD 180
                                                                                                                                                                                                                                                                                   5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-CV. LANDSBERG ERECTA; TISSUE-Flower;
Benedetti C.E., Turner J.G.;
"Nucleotide sequence of an Arabidopsis thaliana cDNA encoding a
                                                                                                                                                                                                                 Length 415;
                                                                                                                                                                                                              Query Match 59.4%; Score 202; DB 1; Length 41 Hvst Local Similarity 60.7%; Pred. No. 2.4e-17; Matches 34; Conservative 9; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          424 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AC003114; AAC24083.1; ALT_SEQ.
EMBL; U66344; AAC49696.1; ALT_INIT.
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CRT2_ARATH
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PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00003; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN REPRAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein; Multigene family.
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                                                                                                                                                                                                                                                                                                                            124 CALRETICULIN 2.
59 N-LINKED (GLCMAC. . .) (POTENTIAL).
124 PREVENT SECRETION FROM ER (POTENTIAL).
19 LVAI -> NSAR (IN REF. 3).
155 G -> E (IN REF. 1).
236 P -> T (IN REF. 3).
48084 MW, 514385EBAE810DD7 CRC64;
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Pred. No. 2.5e-17;
7; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                              POTENTIAL
                                                                                                                                          Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                 Mendel; 6599; Arath;1166;6599.
Mendel; 31147; Arath;1166;31147.
Mendel; 16506; Arath;1166;16506.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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62.5%;
                                   SWISS-2DPAGE; Q38858; ARATH
AAA80652.1;
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Matches 35; Conservative
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424 AA;
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CARBOHYD
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SEQUENCE
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Search completed: January 9, 2002, 15:12:15

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120 DMHGDSPYNIMFGPDICGPGTKKVHVIFNYKGKNLLIKKDIRCKDDEFTHLYTLIVKSDN 179
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Best Local Similarity
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01-MAY-2000 (
01-JUN-2001 (
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102.5
102.5
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SIGNAL
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0906S0;
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018478 litomosoide
076961 necator ame
026514 schistosoma
045034 schistosoma
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041799 zea mays (m
043712 zea mays (m
040040 hordeum vul
040041 hordeum vul
                                               Search time 78.15 Seconds (without alignments) 114.173 Million cell updates/sec
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O91711 xenopus lae
O9u916 drosophila
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098984 rana rugosa
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Q26268 aplysia cal
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097372 dirofilaria
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                                                                               US-09-828-000-4
340
1 TDMHGDSEYNIMFGPDICGP.....IRCKDDEFTHLYTLIVRPDN
4.5
Compugen Ltd
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GenCore version
Copyright (c) 1993 - 2000
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Listing first 45 summaries
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Perfect score:
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Gaps

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Score 309; DB 5; Length 42 Pred. No. 1.7e-29; 2; Mismatches 3; Indels

90.98;

POTENTIAL.
CALRETICULIN.
172C664F59F41F93 CRC64;

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Q9st29 solanum mel
Q40567 nicotiana t
Q9d9q6 mus musculu
Q9d373 mus musculu
                                                                     099111 Leishmania
090426 tritrichomo
090408 trypanosoma
094091 trypanosoma
094592 leishmania
07614 schistosoma
091073 schistosoma
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091073 schistosoma
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Q9hfc6 yarrowla li
Q9ly26 arabidopsis
Q9val7 drosophila
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Q9d2k5 mus musculu
   brassica na
                                                                                                                                                                                                                                                                                                 homo sapien
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Q16094 homo sapien
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strongylocentrotus purpuratus (Purple sea urchin).
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinacea; Echinoida; Strongylocentrotidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Susan J.M., Just M.L., Lennarz W.J.;
Susan J.M., Just M.L., Lennarz W.J.;
"Cloning and Characterization of AlphaP Integrin and Calreticulin in
Embryos of the Sea Urchin.";
Submitted (AuG.1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF177915; AAD55725.1;
InterPro; IPR000886; ER_target.
InterPro; IPR001886; ER_target.
Prints; PR00562; Calreticulin.
Prints; PR00562; Calreticulin.
PRODING PR001866; Calreticulin; 1.
PROSITE; PS00804; CALRETICULIN.
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                                                                                                                                                                                                                                                                                                                                                                                                              421 AA
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Q9NG26
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4422
4427
3889
3889
1337
1337
5559
4401
5582
582
582
622
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Gaps

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Indels

Length 318;

026268 926268

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RESULT Q26268

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1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
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Amphibia; Batrachia; Anura; Mesobatrachia; Pipoldea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CALRETICULIN.
CRC OR CG4249.
Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 343;
                                                                                           36997 MW; C88102EA1CAC1506 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1998 (TrEMBLrel. 05, Last sequence update) 01-JUN-2001 (TrEMBLrel. 17, Last annotation update) CALRETICULIN (FRAGMENT).
Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UUN-2001 (TrEMBLrel. 17, Last annotation update)
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Pred. No. 5.2e-28;
3; Mismatches 5;
                                                                                                                                                                                    Score 303; DB 13;
Pred. No. 6.8e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             406 AA
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EMBL: X67598; CAA47867.1;
InterPro; IPR001580; Calreticulin.
Pfan; PR00262; Calreticulin; I.
PRINTS; PR00626; CALRETICULIN.
PRODOM; P0001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.; I.
PROSITE; PS00804; CALRETICULIN.; I.
PROSITE; PS00805; CALRETICULIN.; I.
                                                                                                                                                                                 Query Match 89.1%; Score 303; DB Best Local Similarity 91.5%; Pred. No. 6.8e Matches 54; Conservative 3; Mismatches
PS00805; CALRETICULIN_REPEAT; PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-BRAIN;
MEDLINE-93074997; Pubmed-1445218;
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Best Local Similarity 86.9%;
Matches 53; Conservative
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                                                                                           318 AA;
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=8355;
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SEQUENCE
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PROSITE;
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Q9U916;
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AN MEDLINE-93098937; Pubmed 1463604;

RA MEDLINE-93098937; Pubmed 1463604;

RA Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;

RY Long-term senaltization training in Aplysia leads to an increase in calreticulin, a major presynaptic calcium-binding protein.";

RY Calreticulin, a major presynaptic calcium-binding protein.";

RY AAB24569.1; -.

DR KHELPFO; IPR000868; ER_terget.

IN INTERPRO; IPR001869; Calreticulin, 1.

DR PRINTS, PR00626; Calreticulin, 1.

PROSTIE; PR00803; CALRETICULIN.1; 1.

PROSTIE; PS00803; CALRETICULIN.1; 1.

PROSTIE; PS00804; CALRETICULIN.2; 1.

DR PROSTIE; PS00804; CALRETICULIN.2; 1.

PROSTIE; PS00804; CALRETICULIN.2; 1.

PROSTIE; PS00804; CALRETICULIN.2; 1.

DR PROSTIE; PS00804; CALRETICULIN.2; 1.

PROSTIE; PS00804; CALRETICULIN.3; 1.

PROSTIE; PS00804; CALRETICULIN.3; 1.
                                                                                                                                                                                                                                                                             Aplywiu californica (Californiu sea hare).
Kukuryotu; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplywiidae; Aplysiu.
NCBI_TuxID-6500;
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"Monophyly of lamprays and hagfishes supported by nuclear DNA-coded
genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lampetra reissneri.
Rukuryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Lampetra.
NCBI_FaxID:7753;
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                                                                                                                                                                       01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-UNV-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN.
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01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89.7%; Score 305; DB 5;
86.9%; Pred. No. 5e-29;
.1ve 5; Mismatches
                                                                                                                     405 AA
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InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
Fram; PP00262; Calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.
                                                                                                                     PRT;
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Best Local Similarity 86.99
Matches 53; Conservative
                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
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Best Local Similarity
Matches 52; Conserv
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Best Local S
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Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
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"Identification of calreticulin isoforms in the central nervous
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                                                                                                                                                                       Submitted (JAN 1997) to the EMBL/GenBank/DDBJ databases.

RIBASE; REM1000518; DAA85379.1; -
RIBASE; REM1000588; Crc.

InterPro; IPR001588; Crc.

InterPro; IPR001588; ER_target.

Rem; PF00262; Calreticulin: 1.

PRINTS; PR00626; Calreticulin: 1.

PROSITE; PS00803; CALRETICULIN. 1.

PROSITE; PS00804; CALRETICULIN. 1.

RPOSITE; PS00804; CALRETICULIN. 2; 1.

PROSITE; PS00805; CALRETICULIN. 2; 1.

RROSITE; PS00805; CALRETICULIN. 2; 1.
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85.2%; Pred. No. 1.4e-27;
ive 4; Mismatches 5; Indels
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CALRETICULIN.
891DA66E00EBBEFA CRC64;
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01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR (FRAGMENT)
                                                                                                                                 Dodo K., Sakoyama Y., Gamo S.; "Drosophila melanogaster calreticulin for mRNA.";
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PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
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EMBL, X67597; CAA47866.1; -
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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NCBI_TaxID=8355;
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                                          NCBI_TaxID=7227;
                                                                                                              STRAIN-OREGON-R;
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                                                                                 1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
                                                                                                                                                                                                                                                                                                                                                                                                                         Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Strong expression of the calreticulin gene in the liver of Rana rugosa Tadpoles."; J. Exp. 2ool. 0:0-0(1996).
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      Length 411;
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01-JAN-1999 (TrEMBLrel. 09, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                               01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
  Score 288; DB 13;
Pred. No. 5.9e-27;
3; Mismatches 6;
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Pred. No. 8e-27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProDom; PD001866; Calraticulin; 1. PROSITE; PS00803; CALRETICULIN_1; 1. PROSITE; PS00804; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Interpro; IPR000886; ER_target.
Interpro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-96234004; PubMed-8654561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00262; calreticulin; 1
PRINTS; PR00626; CALRETICULIN.
84.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Exp. Zool. 0:0-0(1996).
EMBL; D78589; BAA11425.1; -.
                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        frog, Rana rugosa.";
FEBS Lett. 387:27-32(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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44941 MW;
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                                                  80.6%;
80.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JAN-1998 (TrEMBLrel. 05, 01-JAN-1998 (TrEMBLrel. 05, 01-JUN-2001 (TrEMBLrel. 17, RAL-1 PROTEIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Litomosoides sigmodontis.
                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                       Genesis 0:0-0(1999)
              387 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
nes 48; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417 AA;
                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                     CALRETICULIN.
                                                                          48;
              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 018478 018478;
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                                                                                                                                                               RESULT 10
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Matches
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  CHAIN
                                                                           Matches
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KM MEDLINE 99094497; Pubmed-9879888;

MEDLINE 99094497; Pubmed-9879888;

Tauji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;

Tauji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;

Taujian parasite Dirofilaria immitis.";

Mol. Blochem, Parasitol. 97:69-79(1998).

R FMBL; AF052978; AAD034051.;

R FMBL; AF052978; AAD034051.;

R FMRL; AF00262; Calreticulin.

R PRINTS; PR00626; Calreticulin; 1.

R PRODOM; P0001866; Calreticulin; 1.

R PRODOM; P0001866; Calreticulin; 1.

R PROSITE; PS00804; CALRETICULIN_2: 1.

R PROSITE; PS00804; CALRETICULIN_2: 1.
                                                                                                                        'A secreted calreticulin protein in Ixodid tick (Amblyomma americanum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                              Juworski D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 LHGESPYKIMFPPDICGPGTKKVHVIFNYKGKNHLINKEIRCKDDVFTHLYTLIVKPDN 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metuzoa; Nemutoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Dirofilaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 MHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                       Bukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
Purusitiformes; Ixodida; Ixodidae; Amblyomma.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 410;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 82.6%; Score 281; DB 5; Length 41 Brst Local Similarity 84.7%; Pred. No. 4.2e-26; Matches 50; Conservative 4; Mismatches 5; Indels
                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
TISSUE SALLVARY GLANDS;
Fuln Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL, 007708; AGC79094.1; -
InterPro; IPR00886; ER_target.
InterPro; IPR00886; Culreticulin.
                                                                                                                                                                                                             Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                32CCB8750A17DC54 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                      PEUNTS; PRO0262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PROBOM; PD001866; CALRETICULIN; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_1; 1.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1;
SEQUENCE 410 AA; 47485 MW; 32CCB8750A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          387
                                                                                                                                                 Insect Physiol. 41:369-375(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                       SEQUENCE OF 49-410 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                        SEQUENCE FROM N.A.
TISSUE SALIVARY GLANDS;
JUWOFHKI D.C.;
                                                                                    TISSUE SALIVARY GLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
           Amblyomma americanum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dirofilaria immitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TuxID -6287;
                                                NCBI_TaxID-6943;
                                                                                                              Needham G.R.
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SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TOMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                  2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Litomosoides.
NCBI_TaxID-42156;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 417;
                                                                                                         Length 387;
                                                                                   Score 274; DB 5; Lengua J. Pred. No. 2.8e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

MacLennan K., Hoffman W.H., Taylor D.W.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; A3001621; CAA04877.1; -.
InterPro; IFR01580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
CALRETICULIN.
E7741BF6AAFA5885 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000C5B4004699B6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Last annotation update)
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80.0%; Pred. No. 9.2e-25;
iive 6; Mismatches 6;
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                                                                                                                                                             5; Mismatches
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PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN. 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   375
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Differential Gene Expression Screen
                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AF195882; AAF13700.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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Neodermata; Schistosomatidae;

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Eukaryota, Metazoa, Platyhelminthes, Rhabditophora,
Trematoda, Digenea, Strigeldida, Schistosomatoldea,
                       Schistosoma japonicum (Blood fluke).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  350 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 44; Conserv
                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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                                                                                Schistosoma.
NCBI_TaxID-6182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scott J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schistosoma
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SEQUENCE
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                                                                                                                                                                                                                                                           DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Ancylostomatoidea; Ancylostomatidae; Bunostominae; Necator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
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A Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood K., Beritchard D.I., Brown A., McElroy P., Loukas A., Girdwood K., Berry C., Fullkrug R., Beck E., Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.

E Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.

E MEMEL, AJ0060986; ERLATGET.

R PROMITE PRO00265; Calreticulin.

R PROMITE: PRO00265; Calreticulin.

R PROSITE: PS00803; CALRETICULIN.

R PROSITE: PS00804; CALRETICULIN.2; 1.

R PROSITE: PS00804; CALRETICULIN.2; 1.

R PROSITE: PS00804; CALRETICULIN.2; 1.

R PROSITE: PS00804; CALRETICULIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 5; Length 403;
                                                                                                                                                                            Length 375;
                                                                                                                                                                          79.1%; Score 269; DB 5; Length 37
78.3%; Pred. No. 1.1e-24;
iive 6; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76.9%; Score 261.5; DB 5; Length 77.0%; Pred. No. 9.5e-24; ive 6; Mismatches 7; Indels
                                                                                                                375 AA; 43842 MW; 03F7642FBFF7A5B8 CRC64;
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Last annotation update)
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Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                       403 AA
                     ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN.1; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
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                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        403 AA; 46833 MW;
PR00626; CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1998 (TrEMBLrel. 08, 01-NOV-1998 (TrEMBLrel. 08, 01-JUN-2001 (TrEMBLrel. 17, CALRETICULIN PRECURSOR. CRT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2001 (TrEMBLrel. 17,
CALRETICULIN (FRAGMENT).
                                                                                                                                                                          Query Match 79.1
Best Local Similarity 78.3
Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 77.0 Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                        076961;
01-NOV-1998 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Necator americanus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Siqnal; Allergen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=51031;
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SEQUENCE
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PRINTS;
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GN CRT.
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OC ENKATY
OC ANCYL
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Q26514
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Schistosomatidae;
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Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
BMBL; AF044408; AAC00515.1; -.
InterPro; IPR001886; ER_target.
R Pfam; PF00262; calreticulin; 1.
R PROSITE; PS00803; CALRETICULIN.
R PROSITE; PS00803; CALRETICULIN_1: 1.
R PROSITE; PS00804; CALRETICULIN_1: 1.
R PROSITE; PS00804; CALRETICULIN_1: 1.
R PROSITE; PS00804; CALRETICULIN_REPEAT; 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 5; Length 350;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; Indels
STRAIN=CHINESE;
Huggins M.C., Moloney N.A.;
Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; MO524; AAA29917.1; -
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                              40385 MW; 30FAB4E8BB685D1C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schistosoma japonicum (Blood fluke).
Eukaryota, Metazoa; Platyhelminthes; Rhabditophora;
Trematoda; Digenea; Strigeidida; Schistosomatoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-1998 (TrEMBLrel. 06, Created)
01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                73.5%; Score 250; DB 5; 75.9%; Pred. No. 2e-22; iive 6; Mismatches
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                                                                                                                                                             Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_EPEAT; 1.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
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Best Local Similarity 75.9:
Matches 44; Conservative
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Sturch completed: January 9, 2002, 15:03:28 Job time: 270 sec

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Castor bean c Arabidopsis t Arabidopsis t Arabidopsis t Arabidopsis t Arabidopsis t

Human secreted pro Recombinant human Castor bean calnex

Calnexin sequence.

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MBP-calreticulin; maltose binding protein; vasostatin; N-terminal; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antiinflammatory; anti-atherosclerotic;
                                                                                                                                                                                                                                                                                                                               Human vasostatin (calreticulin N-terminal 180 amino acids).
                                                                                                                                                                                                                                                                                                                                                                        gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                    ALIGNMENTS
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                                                                  AAG30996
AAB32385
AAY92353
AAB66342
AAR71094
AAG26284
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AAY00924
AAY00926
AAY77953
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AAY00925
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AAG21849
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AAG30997
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99WO-US23240
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WO200020577-A1
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Synthetic.
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RESULT
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Calreticulin. Hom
Human MBP-calretic
Calreticulin. Hom
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54.309 Million cell updates/sec
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Listing first 45 summaries
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AAY92350
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                                 sw model
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Copyright (c) 1993
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Title: Perfect score:

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Searched:

Inhibiting endothelial cell growth and angiogenesis using calreticulin,

Ľ, Yao

Pike SE,

Tosato G,

WPI; 2000-303767/26

Flea calreticulin Partial sequence o Recombinant human Recombinant delta

AAR12312 AAY92352 AAY92354 AAY92355

340 340 340 340 335 335 235 235 235

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Result Š

Arabidopsis thalia Arabidopsis thalia Arabidopsis thalia Human cC1qR binding A. thaliana enviro Arabidopsis thalia Arabidopsis thalia

Arabidopsis Arabidopsis

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Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY92349) without the 17 N-terminal amino acids. A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental inmunune inflammation, antherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, macular suspensional production, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, macular sustain and suspension in the architecture and suspension architecture and suspension and su
                                                                                                                                                                                                                                                                                                                           Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method also be used for treating/inhibiting tumor growth especially kaposi's sarcome (claimed).
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                                                                                                 Fragments of caireficulin (or its fragments) variants).
Fragments of caireficulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasis, trachomu, noovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, reference theumatoid arthritis, systemic lupus erythromatosus, thyroiditis, syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, surcoidosis and primary biliary cirrhosis). The method may when it is a second of treating tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MBP-culreticulin; maltose binding protein; angiogenesis; inhibition; endothelial call; anti-ungiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-atheritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                  novel method of inhibiting endothelial cell growth comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 180;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 340; DB 21;
Pred. No. 4.3e-39;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Scc. No. 100.0%; Pred. No. 0; Mismatches
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useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Recombinant human MBP-calreticulin.
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                                          Claim 4; Page 82; 99pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                             Kaposi's sarcoma (claimed)
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Best Local Similarity 100.
Matches 61; Conservative
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Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen - used in immunoassays to detect rheumatic disease
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                                                              100.0%; Score 340; DB 21; Length 400;
                                                                                                          Indels
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                                                                                   Pred. No. 1.2e-38;
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                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                McCauliffe DP;
                                                                                                                                                                                                                                                                                                                                                                                                 AAP92276 standard; protein; 417 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Fig 2; 88pp; English.
                                                                   100.08; Fix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89WO-US01213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88US-0171634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TEXA ) UNIV OF TEXAS SYST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-FEB-1990 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60 kD Ro (Ro/SSA) antigen
                                                                                                        61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Capra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1989-309537/42.
                                                                            Best Local Similarity
Matches 61; Conserv
400 AA;
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Length 417;

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61
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                                                                                                                                                                                        RESULT
AAY92349
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence is calreticulin, a homologue of clq and collectin receptor (cClqR). The invention relates to the use of a cClqR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cClqR binding domain in a medicament to inhibit cub functionality. The cClqR binding domain, or its inhibitor; can be used to freat a human or animal body. Particularly an inhibitor is used to complement activation involved in the initiation and maintenance of inflammation, for example in mycocardial infarction, brain isohaemia (stroke), gut ischaemia, rheumatoid arthritis, systemic lupus erythematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                      Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                            9
                                                                                                                   Gaps
                                                                                                                                           1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Use of a cClqR binding domain - to modulate complement ubiquitin (CUB) functionality.
                                                                                                                  ô
                                                                                    Length 417;
                                                                                                                  Indels
                                                                                    Score 340; DB 10;
Pred. No. 1.2e-38;
                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 26-27; 31pp; English.
                                                                                                                                                                                                                                                                                                       AAY00927 standard; Protein; 417 AA.
                                                                                                               ö
                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  low molecular weight molecule.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-GB02430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97GB-0016998.
                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                61; Conservative
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                                                                                  Query Match
Best Local Similarity
                                          417 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              417 AA;
                                                                                                                                                                                                                                                                                                                                                                                              Calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9907406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-AUG-1997;
 or 241-255.
                                                                                                                                                                                                                                                                                                                                                                28-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Schwaeble W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-FEB-1999
                                                                                                                                                                                                                               n 180
                                                                                                                                                                                                    61 N 61
                                                                                                                                                                                                                                                                                                                                    AAY00927;
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                                           Sequence
                  antigens
                                                                                                                                                                                                                                 180
                                                                                                                Matches
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A novel method of inhibiting endothelial cell growth comprises

Contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% Inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immmune of inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, adequated degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatcosu, thyroiditis, goodpasture's syndrome, systemic lupus erythromatcosu, thyroiditis, syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                    ö
                                                                                                                                                                                                                                                                                                                                                                                      MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endochelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  endothelial cell growth and angiogenesis using calreticulin,
                                                                                   Gaps
                                                                1 TOMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                 ;
0
                                  Indels
Score 340; DB 20;
Pred. No. 1.2e-38;
                                    ö
                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label= signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /label= mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 79-80; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1..17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumor growth
                                                                                                                                                                                                                                                   AAY92349 standard; Protein; 417 AA
100.0%; Some 100.0%; Put ive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0103438
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                                    10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kaposi's sarcoma (claimed)
                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   suppressing
                                                                                                                                                                                                                                                                                                                                                       Human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-303767/26
 Query Match
Best Local Similarity
Matches 61; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200020577-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-APR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inhibiting euseful for a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tosato G,
                                                                                                                                                                  n 180
                                                                                                                                N 61
                                                                                                                                                                                                                                                                                     AAY92349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
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Sednence

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Query Match

Matches

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Plea calreticulin protein PCtCall589 (AAW04171) is a calcium-binding protein found in the salivary glands of Ctenocephalides felis.

Its amino acid sequence was deduced from a cDNA clone (AAT19516) obtd. from a callvary gland cDNA library. Recombinant PCtCall589 can be produced in host cells transformed with a vector carrying calreticulin nucleic acids. Calreticulin alters the blood feeding behaviour of haematophagous insects and can be administered to an animal to reduce infestation. It reduces calreticulin activity in insects, so reducing the insect burden on an animal. Calreticulin can be used to elicit an immune response, thereby desensitising an animal to allergic dermatitis caused by fleas, mosquitoes or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 DAHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                  Haematophagous insect calreticulin protein – used to reduce insect infestation and desensitise patients to allergic dermatitis
                                                                                            Calreticulin; flea; haematophagous insect; allergic dermatitis; vaccine; therapy; PCtCal403.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            River blindness; onchocerciasis; vaccine; antigen; parasite.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Partial sequence of Onchocera volvulus 42 kD antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 290; DB 17;
Pred. No. 9.8e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 5; Page 68-69; 86pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR12312 standard; Protein; 336
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9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      85.3%;
83.3%;
                                                                                                                                                                                                                                  96WO-US03133
                                                                Flea calreticulin PCtCal403
                                                                                                                                                                                                                                                              95US-0401509
                                 12-DEC-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                          GL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                        Rushlow KE, Stiegler
                                                                                                                                          Ctenocephalides felis
                                                                                                                                                                                                                                                                                                                                                     WPI; 1996-442861/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            volvulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAT39516;
N-PSDB; AAT39517.
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                                                                                                                                                                                                                                                                                          (HESK-) HESKA
                                                                                                                                                                      WO9628469-A1
                                                                                                                                                                                                                                08-MAR-1996;
                                                                                                                                                                                                                                                             09-MAR-1995;
                                                                                                                                                                                                    19-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Culicoides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Onchocerca
      AAW04171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR12312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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AAR1231
ID AAX
XX
XX
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DT 29
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DE Pa.
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SY
SFH KEE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is calreticulin. It and a C-domain derived peptide (AAN06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type cpds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage
                                                                                                                       Gaps
                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                      1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inhibition of restenosis in patients - using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ó
                                                Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 401;
                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                            Score 340; DB 21;
Pred. No. 1.2e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 18;
5.7e-38;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                              calreticulin; C-domain; restenosis; inhibitor,
                                          ch 100.0%; Score 340; I Similarity 100.0%; Pred. No. 1.5 61; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 335;
Pred. No.
                                                                                                                                                                                                                                                                      AAW11156 standard; peptide; 401 AA.
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100.0%; Pre
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 1; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to inhibit or prevent restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96WO-IB00471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-0649417
95US-0442844
                                                                                                                                                                                                                                                                                                                                     entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYAL-) UNIV ALBERTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Michalak M;
                                                                                                                                                                                                                                                                                                                                  (first
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Best Local Similarity
Matches 60; Conserv
                                                        Best Local Similarity
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417
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Calreticulin.

31-MAY-1997

AAW11156;

n 180 61 N 61

180

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AAW11156

Homo suplens WO9636643-A1

17-MAY-1996; 16-MAY-1996; 17-MAY-1995;

Lucus A,

activity

21-NOV-1996

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Gaps

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Location/Qualifiers 160..166

Key Region

AAW04171 standard; Protein; 403 AA

RESULT AAW04171

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Seguence

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99WO-US23240 98US-0103438

Yao L;

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A novel method of inhibiting endothelial cell growth comprises

contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis,
tumor growth and/or endothelial cell growth (claimed). The method may be
used for inhibiting angiogenesis in a patient. The angiogenesis is
associated with a disease other than a tumor that is associated with
neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia,
trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune
convacularization, macular degeneration, corneal graft rejection,
contact lens overwear, orboh's disease, non-immune inflammation,
contact lens overwear, crohn's disease, non-immune inflammation,
cheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
cheumatoid arthritis, systemic vasculitis, scleroderma, Sjorgen's
syndrome, sarcoidosis and primary blilary cirrhosis). The method may
                                                                                                                                                                                                                                                                                         Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                   (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                           Claim 4; Page 82-83; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                       Tosato G, Pike SE,
                                                                                                                                                                                                                                                     WPI; 2000-303767/26
                                                WO200020577-A1
                                                                                                                                                   06-OCT-1998;
                                                                                                                  05-0CT-1999;
                                                                                  13-APR-2000
                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from RNA isolated from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically bind to protein prepd. from induced cultures of lambda RAL-1 lysogens recognise a single polypeptide of mol. wt. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. wt. 39,130. If the suggests that it encodes a protein of mol. wt. 39,130. If the cutigen is not subject to post-translational processing this suggests that most of the coding sequence is present. The three repeats are highly hydrophilic regions likely to be exposed on the antigen expressed by the clone can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                            DNA encoding Onchocerca volvulos antigen - used to express recombinant antigen for vaccine against onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The sequence was deduced from a cDNA clone lambda RAL-1 prepd
                       177...183
/label= repeat unit
/note= "hydrophilic"
195...201
/label= repeat unit
/label- repeat unit
/note- "hydrophilic"
                                                                                                                /note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 7; 20pp; English.
                                                                                                                                                                                                                     88US-0214264.
                                                                                                                                                                                                                                                                                         (UYHO-) UNIV HOSPITALS CLEV
                                                                                                                                                                                                                                                                                                                         Greene BM, Unnasch TR;
                                                                                                                                                                                                                                                                                                                                                          WPI; 1991-185179/25.
N-PSDB; AAQ11987.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               336 AA;
                                                                                                                                                                                                                   30-JUN-1988;
                                                                                                                                                   US5021342-A.
                                                                                                                                                                                     04-JUN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                blindness
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                  Region
                                                                              Region
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ó:
                                                                                                                                                                                                                              MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                        Gaps
                        ;
0
Length 61;
                      Indels
                                               61
                                                          18 CGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN
71.8%; Score 244; DB 21; 100.0%; Pred. No. 2.1e-26;
                                                                                                                                                                                                        Recombinant human calreticulin residues 121-180.
                         Mismatches
                                                                                                                                  AAY92354 standard; Protein; 60 AA.
  71.0.08; Pre
                                                                                                                                                                                 10-AUG-2000 (first entry)
                        Conservative
        Best Local Similarity
Matches 44; Conserv
                                                                                                                                                                                                                                                                                                                                WO200020577-A1.
                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                           13-APR-2000
                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                         AAY92354;
Query Match
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                                                                                                                      AAY92354
ID AAY9
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Gaps

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61

AAY92352 standard; Protein;

AAY92352 RESULT

2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61

76.8%; Score 261; DB 12; Length 336; larity 76.7%; Pred. No. 8.1e-28; Conservative 6; Mismatches 8; Indels (

Local Similarity les 46; Conserv

Matches

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Query Match Best Local S

MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.

Recombinant human calreticulin residues 120-180.

(first entry)

10-AUG-2000

AAY92352;

61 AA;

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96US-0675816
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.
Matches 43; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Winfrey RJ;
                                   Inhibiting endothelial useful for suppressing
             WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-122335/13
                                                                                                                                                                                                                                                                                                                     280 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ricinus communis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Coughlan SJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US6171864-B1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-JAN-2001.
                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB66341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB66341
   Op
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                                                                                                                                                                   contacting the cells with calreticulin (or its fragments/variants).

Contacting the cells with calreticulin (or its fragments/variants).

Cragments of calreticulin causes at least 40% inhibition of analogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis of the analogenesis is associated with a disease other than a tumor that is associated with necvascular glaucoma, paoriasis, angiofibromas, immune of inflammation, atherosciarosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, crohn's disease, non-immune inflammation, contact lens overwear, systemic lauge rythromatosus, thyroiditis, Goodpanture's syndrome, systemic lumps erythromatosus, thyroiditis, syndrome, surcoidosis and primary billiary cirrhosis). The method may also a labo be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                Inhibiting endothelial call growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                               Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                        69.1%; Score 235; DB 21;
100.0%; Pred. No. 3.7e-25;
1ve 0; Mismatches 0;
                                            (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Recombinant delta-120 calreticulin.
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                                                                                                                                                   Claim 4; Page 85; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92355 standard; Protein; 280
99WO-US23240
                      98US-0103438
                                                                    Yao L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-US23240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tosuto G, Pike SE, Yao L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                     Kaposi's surcoma (claimed
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.0
Matches 43; Conservative
                                                                   Cosato G, Pike SE,
                                                                                         WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                            60 AA;
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05-OCT-1999;
                      06-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                             Seguence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
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This sequence comprises recombinant human calreticulin (AAY92350)
missing the N-terminal 120 amino acids.
A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).
Fragments of calreticulin causes at least 40% inhibition of
anjiogenesis, tumor growth and/or endothelial cell growth (claimed). The
method may be used for inhibiting angliogenesis in a patient. The
anglogenesis is associated with a disease other than a tumor that is
method may be used for inhibiting angliogenesis, in a patient. The
associated with neovascularization (e.g. diabetic neuropathy, retrolental
fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas,
immune inflammation, atherosclerosis, excessive wound repair, retinal
neovascularization, adecuar degeneration, corneal graft rejection,
contact lens overwear, Crohn's disease, non-immune inflammation,
cheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
syndrome, sarcoldosis and primary biliary cirrhosis). The method may
also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
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cell growth and anglogenesis using calreticulin, tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Castor bean; calreticulin; calcium binding; er; endoplasmic reticulum;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69.1%; Score 235; DB 21;
100.0%; Pred. No. 2.5e-24;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Castor bean calreticulin SEQ ID NO: 2.
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                                                                                                                  Claim 4; Page 86; 99pp; English.
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Gaps

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Sequence

 $X \times CCCCCCCCX$ 

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Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter;
                                             5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
   13; Indels
                                                                                                                                                                                                                         Arabidopsis thaliana protein fragment SEQ ID NO: 28351.
   Mismatches
                                                                                                                                    Ā
                                                                                                                                  AAG24609 standard; Protein; 312
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99US-0123180.
99US-0123548.
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99US-0132486.
99US-0132487.
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99US-0134218
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99US-0126785
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99US-0130510
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99US-0135629
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99US-0139452
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   Matches 34; Conservative
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                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana
                                                                                                                                                                                                                                                                                    termination sequence
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04-MAY-1999;
05-MAY-1999;
06-MAY-1999;
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23-APR-1999,
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28-APR-1999,
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16-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                             06-SEP-2000
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                                                                                                                                                                AAG24609;
                                                                                                                      AAG24609
                                                                                                        RESULT
                                à
                                                           Db
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                           The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells -
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                                                                                                                                                                                                         Score 202; DB 22; Length 415; Pred. No. 1.5e-19;
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                                                                                                                                                                                                                                       13; Indels
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Pred. No. 1.5e-19;
                                                                                                                                                                                                                                     9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                          AAB66343 standard; Protein; 415 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (PION-) PIONEER HI-BRED INT INC.
Claim 1; Fig 3; 45pp; English.
                                                                                                                                                                                                         59.4%;
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60.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Castor bean calreticulin.
                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Coughlan SJ, Winfrey RJ;
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N-PSDB; AAF29755.
                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 34; Conserv
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Best Local Similarity
                                                                                                                                                              415 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ricinus communis.
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US6171864-B1.

05-APR-2001

AAB66343;

RESULT 13 AAB66343

ð qq 05-JUL-1996; 05-JUL-1996;

Sequence

09-JAN-2001

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99US-0148565

13-AUG-1999;

PR

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PR 16-7UN-1999; 99US-0119453.

PR 18-UUN-1999; 99US-01194452.

PR 18-UUN-1999; 99US-0119455.

PR 18-UUN-1999; 99US-0119455.

PR 18-UUN-1999; 99US-0119455.

PR 18-UUN-1999; 99US-011945.

PR 18-UUN-1999; 99US-011945.

PR 18-UUN-1999; 99US-011946.

PR 18-UUN-1999; 99US-011946.

PR 21-UUN-1999; 99US-011946.

PR 22-UUN-1999; 99US-011946.

PR 23-UUN-1999; 99US-011987.

PR 23-UUN-1999; 99US-011287.

PR 23-UUN-1999; 99US-011288.

PR 23-UUN-1999; 99US-0114433.

PR 23-UUN-1999; 99US-0114433.

PR 23-UUN-1999; 99US-011488.

PR 23-UUN-1999; 99US-011488.
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	Length 312; Indels 0;
	Score 194; DB 21; Pred. No. 1.4e-18; 7; Mismatches 15;
9905-01485959 9905-01491759 9905-01491759 9905-0149426 9905-0149426 9905-0149723 9905-0149723 9905-015066 9905-0151303 9905-0151303 9905-0151303 9905-0151303 9905-0151303 9905-0151303 9905-0151303 9905-01513303 9905-01513303 9905-0159295 9905-0159295 9905-01593310 9905-0159295 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0159331 9905-0160980 9905-0160980 9905-0160980 9905-0160980	57.1%; larity 60.7%; Conservative
13. Aug. 1999; 16. Aug. 1999; 17. Aug. 1999; 20. Aug. 1999; 21. Aug. 1999; 22. Aug. 1999; 23. Aug. 1999; 24. Aug. 1999; 25. Aug. 1999; 26. Aug. 1999; 27. Aug. 1999; 27. Aug. 1999; 27. Aug. 1999; 27. Aug. 1999; 28. SEP 1999; 29. SEP 1999; 20. SEP 1999; 21. Oct. 1999; 22. SEP 1999; 23. Aug. 1999; 24. SEP 1999; 25. Cot. 1999; 26. Cot. 1999; 27. Cot. 1999; 28. SEP 1999; 29. SEP 1999; 21. Cot. 1999; 22. Cot. 1999; 23. Cot. 1999; 24. Cot. 1999; 25. Cot. 1999; 26. Cot. 1999; 27. Cot. 1999; 28. Cot. 1999; 29. Cot. 1999; 20. Cot. 1999; 21. Cot. 1999; 22. Cot. 1999; 23. Cot. 1999; 24. Cot. 1999; 25. Cot. 1999; 26. Cot. 1999; 27. Cot. 1999; 28. Cot. 1999; 28. Cot. 1999; 29. Cot. 1999; 29. Cot. 1999; 20. Cot. 1999; 20. Cot. 1999; 20. Cot. 1999; 21. Cot. 1999; 22. Cot. 1999; 23. Cot. 1999; 24. Cot. 1999; 25. Cot. 1999; 26. Cot. 1999; 27. Cot. 1999; 28. Cot. 1999; 29. Cot. 1999; 20. Cot. 1999;	Query Match Best Local Similarity Matches 34; Conser
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Gaps

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99US-0139460.
99US-0139461.
99US-0139463.
99US-0139750.
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20-AUG-1999;
20-AUG-1999;
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                                                                                Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter; termination sequence.
                                                                Arabidopsis thaliana protein fragment SEQ ID NO: 60470.
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                                                                                                                                                                                  9905-0121825.
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9905-0125788.
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                                                                                                                 Arabidopsis thaliana
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18-JUN-1999;
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5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60

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Search completed: January 9, 2002, 15:01:12 Job time: 158 sec

Query Match 57.1%; Score 194; DB 21; Length 312; Best Local Similarity 60.7%; Pred. No. 1.4e-18; Matches 34; Conservative 7; Mismatches 15; Indels 0; Gaps

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Sequence 6, Appl
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/cgn2_6/ptodata/2/laa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/laa/backfiles1.pep:*
GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/2/1aa/5A_COMB.pep:*/cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
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US-09-687-898-4
US-08-307-499-28
US-09-299-268-28
US-07-813-593-2
US-07-946-507-2
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US-08-295-362-2
US-08-378-61A-78
US-08-485-286-78
US-07-901-707-7
US-07-988-430-7
US-08-425-336-7
US-08-417-44B8-7
US-08-447-44B8-7
US-08-646-360-7
US-08-646-360-7
US-08-116-389-7
US-09-116-389-7
US-09-116-389-7
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                                                                                                                                                          2002, 14:59:42
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Maximum Match 100%
Listing first 45 summaries
                                                                                                  protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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length: 2000000000
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Perfect score:
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Maximum DB
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APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
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   Sequence 2, Al Sequence 5, Al Sequence 5, Al Sequence 8, Al Sequence 8, Al Sequence 8, Al Sequence 10, Al Sequence
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Sequence 11,
Sequence 12,
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ZIP: 98104-7092
COMPOTER: READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
PCT-US92-09893-2
US-08-232-299-2
US-08-434-8P8-2
PCT-US95-03718-2
US-08-816-236-9
US-08-394-189B-5
PCT-US93-05701-20
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US-08-453-866-10
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US-08-454-097-12
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US-08-454-097-12
US-09-100-664A-11
US-09-100-664A-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Seed and Berry STREET: 701 Fifth Ave. Suite 6300 CITY: Scattle STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: No. 6171864tenburg, Carol
REGISTRATION NUMBER: 39,317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 2, Application US/08675816; Patent No. 6171864; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 7500
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206-622-4900
TELEFAX: (206)-682-6031
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 415 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
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Matches 34; Conserv
       116.0
116.0
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117.7
117.6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-675-816-2
       Query Match
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GENERAL INFORMATION:

APPLICANT: WALSH, TERENCE A

APPLICANT: WALSH, TERENCE A

APPLICANT: WALSH, TERENCE A

APPLICANT: WALSH, TERENCE A

TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE

TITLE OF INVENTION: USING

TITLE OF INVENTION: USING

NUMBER OF SEQUENCES: 81

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: US
ZIP: 46268
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OMPUTER: SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/378,761A
FILING DATE: 26.JAN-1995
CLASSIFICATION: 435
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,362
FILING DATE: 25-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 120.5; DB 1;
Pred. No. 5.1e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 HGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 78, Application US/08378761A Patent No. 5635384
                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Deehr, Manya S.
REGISTRATION UNUBER: 37,120
REFERENCE/DOCKET NUMBER: 6900
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELERIOR: (206) 622-4900
TELER: 3723836
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: ANDREA T. BORUCKI
STREET: 9330 ZIONSVILLE ROAD
CITY: INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: BORUCKI, ANDREA T
REGISTRATION NUMBER: 33651
REFERENCE/COCKET NUMBER: 3
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 35.4%;
Best Local Similarity 39.7%;
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-296-362-2
                                                                                                                                                        FILING DATE: 25 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||||: |||
240 TLILNPDN 247
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US-08-378-761A-78
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                                                                          GENERAL INFORMATION:
APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITHORNETION: CARRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND USES NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INCOMMATION:
APPLICANT: Bergeron, John J.M.
APPLICANT: Thomas, David Y.
APPLICANT: Thomas, David Y.
APPLICANT: Thomas, David Y.
APPLICANT: Thomas, David Y.
APPLICANT: Thus
TITLE OF INVENTION: METHODS OF DETECTION AND TREATMENT OF
TITLE OF INVENTION: PROTEIN TRAFFICKING DISORDERS AND INCREASING SECRETORY
TITLE OF INVENTION: PROTEIN PRODUCTION
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSED and BERRY
STREFT: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     э;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36.9%; Score 125.5; DB 4; Length 542; 42.4%; Pred. No. 9.7e-09; Live 8; Mismatches 23; Indels 7.
                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
CITY: Seattle
STREET: Washington
COUNTR: Washington
COUNTR: U.S.A.
ZIP: 98104-7092
COMBUTER: READALE FORM:
MEDIUM TYPE: Floppy disk
COMBUTER: BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: BA PC-DOS/MS-DOS
SOFTWARE: BA PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: NO. 611864 tends
SEQUENCE CHARACTERISTICS:
TELEPHONE: (206-622-4900
TELEPHONE: C206-622-4900
TELEPHONE: C206-622-4900
TELEPHONE: G206-622-4900
TELEPHONE: AS BOO ID NO: 6:
SEQUENCE CHARACTERISTICS:
LEMEGTH: 542 amino acids
TYPE: amino acid
TYPE: amino acid
                                 Sequence 6, Application US/08675816 Patent No. 6171864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Skyuence 2, Application US/08296362
Patent No. 5691306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 36.9
Best Local Similarity 42.4
Matches 28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Scattle
STATE: Washington
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ZIP: 98104-7092
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56 IVRPDN 61
       US-08-675-816-6
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32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVAVDV----

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INFORMATION FOR SEQ ID NO:

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APPLICANT: Berhard, Susan L.
APPLICANT: Better, Marc D.
APPLICANT: Carroll, Steve F.
APPLICANT: Lane, Julie A.
TITLE OF INVENTION: Materials Comprising and Methods of
TITLE OF INVENTION: Composition and Use for Ribosome-Inactivating Proteins
CORRESPONDENCE: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Bernhard, Susan L.
APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Lane, Julie A.
APPLICANT: Lene, Shau-Ping
TITLE OF INVENTION: Materials Comprising and Methods of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION DATA:
TELINO DATE: 19920619
CLASSIFICATION 1935
PIONR APPLICATION DATE: 9020619
CLASSIFICATION NUMBER: 05 07/787,567
APPLICATION NUMBER: 05 07/787,567
ATTING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: NO. 5376546and, Greta E.
REGISTRATION NUMBER: 35,302
                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Bicknell
                                                                                                                                                                                                                                                                                                                                                                               STREET: Two First National Plaza, 20 South Clark STREET: Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27129/30910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                   Sequence 7, Application US/07901707
Patent No. 5376546
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (312) 346-5750
TELERAX: (312) 984-5750
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 27 TELECOMMUNICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 60603
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Chicago
STATE: Illinois
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
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                                            RESULT 6
US-07-901-707-7
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Sequence 78, Application US/08485286

Patent No. 5646026

APPLICANT: WALSH, TERENCE A

APPLICANT: MARCHINE NATION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE

TITLE OF INVENTION: USING

NUMBER OF SEQUENCES: 81

CORRESPONDENCE ADDRESS:

ADDRESSEE: ANDREA T. BORUCKI

STREET: 9330 ZIONSVILLE ROAD

CITY: INDIANAPOLIS

STATE: IN

COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
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                                                                                                                                                                                                   DB 1; Length 250;
                                                                                                                                                                                                                                                                                                                       16; Indels
                                                                                                                                                                                                                                                                                           9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,286
                                                                                                                                                                                                   17.1%; Score 58; DB 29.2%; Pred. No. 4.2; tive 10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/378761
FILING DATE: 26-JAN-1995
ATORNEY/AGENT INFORMATION:
NAME: BORUCKI, ANDREA T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 46268
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: BORUCKI, ANDREA T
REGISTRATION NUMBER: 33651
REFERENCE/DOCKET NUMBER: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 250 amino acids
TYPE: amino acid
STRANDEDNES: single
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 29.2%
Matches 14; Conservative
                                                                                                                                                                                                                          Best_Local Similarity 29.29
Matches 14; Conservative
SEQUENCE CHARACTERISTICS
LENGTH: 250 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; MOLECULE TYPE: protein US-08-485-286-78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                  US-08-378-761A-78
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
US-08-485-286-78
                                                                                                                                                                                                   Query Match
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9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55

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NAME: Meyers, Thomas C. REGISTRATION NUMBER: P-36,989
                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 31
TELECOMUNICATION INFORMATION:
TELEPHONE: 312/474-630
TELEFAX: 312/474-648
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     263 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 29.28
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 60661
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chicago
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-425-336-7
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STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
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    Preparation and Use for Ribosome-Inactivating Proteins 101
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Carroll, Stephen F.
APPLICANT: Carroll, Stephen F.
TITLE OF INVENTION: Immunotoxins Comprising Ribsome-Inactivating TITLE OF INVENTION: Proteins
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 140
CORRESPONDENCE ADDRESS:
ADDRESSE: Marshall, O'Toole, Gerstein, Murray & Borun STREET: 6300 Sears Tower, 233 South Wacker Drive CITY: Chicago STREE: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17.1%; Score 58; DB 1; Length 263; 29.2%; Pred. No. 4.5; tive 10; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
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                                                                ADDRESSER: Marshall, O'Toole, Gerstein, Murray & ADDRESSER: Bicknell
STREET: Two First National Plaza, 20 South Clark
STREET: Street
STREET: Street
CITY: Chicago
STATE: 1111nois
COUNTRY: USA
                                                                                                                                                                                                                                     COMPOTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Putentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/988,430
FILING DATE: 19921209
                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: NO. 5416202and, Greta E.
REGISTRATION NUMBER: 35302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 3133
TELECOMMUNICATION INFORMATION:
TELEPHONE: (312) 346-5750
TELEPHONE: (312) 984-9740
TELERA: 25-3856
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARATTERISTICS:
LENGTH: 263 umino acids
TYPE: AMINO ACID
TOPOLOGY: 1100ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 7, Application US/08425336 Patent No. 5621083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: Floppy disk
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 29.2%
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; MOLECULE TYPE: protein US-07-988-430-7
TITLE OF INVENTION: Pronumber of SEQUENCES: 10 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                          60603
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Gaps
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Patent No. 5744580
Patent No. 5744580
Patent No. 5744580
Patent No. 5744508

APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Studnika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
TITLE OF ENDENCES: 169
CORRESPONDENCE ADDRESS: 169
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8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,113B
FILING DATE: 07-JUN 1995
CLASSIFICATION 1530
PRIOR APPLICATION 1830
PRIOR APPLICATION NUMBER: US 08/425,336
FILING DATE: 18-APR-1995
PRIOR APPLICATION NUMBER: US 08/064,691
FILING DATE: 12-MAY-1993
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: McAndrews, Held & Malloy, Ltd.
STREET: 500 West Madison Street, 34th floor
                                                                          APPLICATION NUMBER: US/08/425,336
FILING DATE: 18-APR-1995
CLASSIPICATION 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/064,691
FILING DATE: 12-MX-1993
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION NUMBER: US 07/97,567
FILING DATE: 04-NOV-1991
ATTORNEY,AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Gaps
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Studnika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
TITLE OF INVENTION: Proteins
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8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVAVDV-----TNVYIM 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
                                                                                                                                                                                  11022US07/200-70.P3.C2A
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500 West Madison Street, 34th floor
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FILING DATE: 12-MAY-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/988,430
FILING DATE: 09-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
FITING NAME NAME
                                                  PELICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: MCNICholas, Janet M.
REGISTRATION NUMBER: 32,918
REFERNCE/DOCKET NUMBER: 11022US07/2
TELEPHONE: 312/707-9155
TELEPHONE: 312/707-9155
TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve;
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/646,360
FILING DATE: 13-MAY-1996
CLASSIFICATION: 530
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APPLICATION NUMBER: PCT/US94/05348
FILLING DATE: 12-MAY-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/064,691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PILITING APPLICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 7, Application US/08646360
; Patent No. 5837491
            FILING DATE: 19-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 19-JUN-1992
                                                                                                                                                                                                                                                                                                                                                     LENGTH: 263 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                  , MOLECULE TYPE: protein US-08-477-484B-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                          linear
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STATE: Illinoi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 60661
                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Studnika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES:
ADDRESSE: McAndrews, Held & Malloy, Ltd.
STREET: 500 West Madison Street, 34th floor
CITY: Chicago
STATE: Illinois
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .,
8
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APPLICATION NUMBER: US 07/988,430
FILING DATE: 09-DEC-1992
PRIOR APPLICATION DATA:

PRIOR APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION NUMBER: US 07/787,567
FILING DATE: 19-JUN-1991
ATTORNEY/AGENT INFRARATION:
NAME: MCNICholas, Janet M.
REGISTRATION NUMBER: 32,918
REFERENCE/DOCKET NUMBER: 31,918
TELEPHONE: 312/707-9155
TELEPAX: 312/707-9155
TELEPAX: 313/707-9155
TELEPAX: 313/707-9155
TELEPAX: 313/707-9155
TELEPAX: 313/707-9155
TELEPAX: 313/707-9155
TELENGTH: 263 amino acids
TYPE: amino acids
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,484B
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION UNBER: US 08/425,336
FILING DATE: 18-APR-1995
PRIOR APPLICATION NUMBER: US 08/064,691
FILING DATE: 12-MAY-1993
PRIOR APPLICATION NUMBER: US 07/988,430
FILING DATE: 09-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
APPLICATION NUMBER: US 07/901,707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 60661
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 7, Application US/08477484B Patent No. 5756699
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Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
US-08-477-484B-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-488-113B-7
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Carroll, Stephen F.
APPLICANT: Studnika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 173
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                           Query Match 17.1%; Score 58; DB 4; Length 263; Best Local Similarity 29.2%; Pred. No. 4.5; Matches 14; Conservative 10; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                   9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
                                                                                                                                                                                                                                                                                                                                                                                                                                 32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVAVDV-----TNVYIM 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:

REDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER PER PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOSTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/136,389

FILING DATE: 13-MAY-1996

APPLICATION NUMBER: PCT/US94/05348

FILING DATE: 12-MAY-1996

APPLICATION NUMBER: US/09/4/691

FILING DATE: 12-MAY-1993

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/88,430

FILING DATE: 12-MAY-1993

PRIOR APPLICATION NUMBER: US/07/988,430

FILING DATE: 09-DEC-1992

PRIOR APPLICATION NUMBER: US/07/901,707

FILING DATE: 19-JUN-1992

PRIOR APPLICATION NUMBER: US/07/87,567

FILING DATE: US-WAY-1991

APPLICATION NUMBER: US/07/87,567

FILING DATE: US/NOV-1991

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: McAndrews, Held & Malloy, Ltd.
500 West Madison Street, 34th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7, Application US/09136389 Patent No. 6146850
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                              TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
                                                                                 SEQUENCE CHARACTERISTICS: LENGTH: 263 amino acids
        312/707-9155
                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-839-765-7
                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Illinois
: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
STREET: 50
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        TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-136-389-7
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Carroll, Stephen F.
TILE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUFTRAINED STATEM.

SUFTRAINED STATEM.

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/839,765

FILING DATE: 15-APR.1997

PRIOR APPLICATION NUMBER: US/08/839,765

FILING DATE: 18-APR.1995

PRIOR APPLICATION NUMBER: US 08/425,336

FILING DATE: 18-APR.1995

PRIOR APPLICATION NUMBER: US 08/064,691

FILING DATE: 12-MAY-1993

PRIOR APPLICATION NUMBER: US 07/988,430

FILING DATE: 09-DEC-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/988,430

FILING DATE: 09-DEC-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/901,707

FILING DATE: 19-JUN-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/901,707

FILING DATE: 19-JUN-1992
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REGISTRATION NUMBER: 32,918
REGISTRAPOCKET NUMBER: 11022US09/200-70.P3.C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/707-8889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: McAndrews, Held & Malloy, Ltd.
STREET: 500 West Medison Street, 34th floor
CITY: Chicago
COUNTE: Illinois
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10; Mismatches
NAME: McNicholas, Janet M.
REGISTRATION NUMBER: 32,918
REFERENCE/DOCKET NUMBER: 200-70.P4
TELECOMMUNICATION:
TELEPHONE: 312/707-8889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 07/787,567 FILING DATE: 04-NOV-1991 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
US-08-839-765-7
Sequence 7, Application US/08839765
Patent No. 6146631
                                                                                                                          TELEBRA: 312/707-9155
TELEKX: 650 308-1248
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rest Local Similarity 29.2%
Matches 14; Conservative
                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-646-360-7
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9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07601
                                                                                                                          RESULT 15
US-09-100-664A-10
                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Materials Comprising and Methods of TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins UNMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                           5;
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                                                                                                                                                                  Query Match 17.1%; Score 58; DB 4; Length 263; Best Local Similarity 29.2%; Pred. No. 4.5; Matches 14; Conservative 10; Mismatches 16; Indels
                                                                                                                                                                                                                                                   9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
                                                                                                                                                                                                                                                                             32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVAVDV-----TUVYIM 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Bicknell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: Two First National Plaza, 20 South Clark STREET: Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/09487
FILING DATE: 19921104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION:
PRIOR APPLICATION DATA:
APPLICATION UNBER:
TLING DATE: 19-JUN-1992
PRIOR APPLICATION UNBER: 05 07/901,707
APPLICATION UNBER: 05 07/87,567
FILING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: Noland, Greta E.
REGISTRATION UNBER: 35302
REFERENCE/DOCKET NUBER: 31133
TELECHONE: (312) 346-5750
TELEPHONE: (312) 346-5750
TELEPHONE: (312) 944-9740
TELEPHONE: (312) 944-9740
TELEPHONE: (312) 944-9740
TELEPHONE: CARRACTERISTICS:
SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7, Application PC/TUS9209487
GENERAL INFORMATION:
APPLICANT: Bernhard, Susan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Better, Marc D.
Carroll, Stephen F.
Lane, Julie A.
Lei, Shau-Ping
SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
FYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-136-389-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 17.1
Best Local Similarity 29.2
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE: protein PCT-US92-09487-7
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COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Chicago
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PCT-US92-09487-7
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APPLICANT:
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6 DSEYNIMFGPDICGPGTKKVHVIFNYKG-----KNVLINKDIRCKDDEFTHLYTLI---V 57
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                                                                                                                                                                                                                      TITLE OF INVENTION: A NOVEL CLOCK GENE AND METHODS OF USE TITLE OF INVENTION: THEREOF NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 319;
32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVAVDV-----TNVYIM 72
                                                                                                                                                                                                                                                                                                                                                                                                        DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 16.5%; Score 56; DB:
Best Local Similarity 29.7%; Pred. No. 11;
Matches 19; Conservative 10; Mismatches
                                                                                                                                                                                                                                                                                                             411 Hackensack Avenue, 4th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION: '
NAME: Jackson Esq., David A.
REGISTRATION UNDBER: 26,742
REFERENCE/DOCKET NUMBER: 600-1-221
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEPHONE: 201-343-1684
TELEEX: 133521
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Search completed: January 9, 2002, 14:59:43 Job time: 70 sec
                                                                                              ; Sequence 10, Application US/09100664A; Patent No. 6057129
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                              Klauber & Jackson
                                                                                                                                              APPLICANT: YOUNG, MICHAEL W. APPLICANT: KLOSS, BRIAN APPLICANT: BLAU, JUSTIN APPLICANT: PRICE, JEFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   319 amino acids
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NO
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
                                                                                                                                                                                                                                                                                                                                                STATE: New Jersey
                                                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: sin
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amino acid
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Best Local Similarity
Matches 15; Conserv
TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-675-816-2
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                                                      Search time 38.34 Seconds (without alignments) 15.847 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 14,
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
               Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                           US-08-208-036-17

US-08-228-823-17

US-08-208-036-14

US-08-946-679-63

US-08-946-679-63

US-09-115-395-23

US-09-115-395-23

US-09-115-395-23

US-08-316-615-2

US-08-56-655-655-2

US-08-56-67-2

US-08-946-967-2

US-08-946-967-2

US-08-946-967-2

US-08-946-967-2

US-08-941-183-10

US-08-941-183-10

US-08-941-183-10
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5-08-117-952-757
5-08-378-761A-78
5-08-485-286-78
                                                                                                                                                                Total number of hits satisfying chosen parameters:
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                                                                                                        1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                212252 seqs, 22503292 residues
                                                         ٠.
       GenCore version
Copyright (c) 1993 - 2000
                                                       9, 2002, 14:59:43
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Maximum Match 100%
Listing first 45 summaries
                                       sw model
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Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                            Issued_Patents_AA:*
                                       protein search, using
                                                                                                                                                                                  seq length: 0
seq length: 2000000000
                                                                                     US-09-828-000-5
151
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1113
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496
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351
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Match
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Maximum DB:
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                                                                                                         Sequence:
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                                                       Run on:
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Sequence 2, Application US/08675816;
Patent No. 6171864
GENERAL INFORMATION:
APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US
NUMBER OF SEQUENCES: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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STREET: 701 Fifth Ave. Suite 6300
CITY: Seattle
STATE: Washington
COUNTRY: U.S.A.
ZIP: 98104-7092
COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 82; DB 4; Le
Pred. No. 0.00013;
                                                                                US-08-839-765-7

US-09-136-389-7

US-09-136-389-7

US-09-032-315-3

US-09-3986-3

US-09-3986-3

US-09-576-281-3

US-08-576-281-3

US-08-44-4

US-08-476-123-4

US-08-473-1688-4
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CLASSIFCATION: 435
ATTORNEY, AGENT INFORMATION:
NAME: No. 6171864 tenburg, Carol
REGISTRATION NUMBER: 39, 317
REFERENCE/DOCKET NUMBER: 750027.401
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206-622-4900
TELEPHONE: (206)-682-6031
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   138 CGYSTKKVHAILNYNDTNHLIKKEVPC 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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ilarity 55.6%; Pr
Conservative 2;
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                  Sequence 17, Application US/08208036
FREEDER NO. 5446326
GENERAL INFORMATION:
APPLICANT: VOSHILUMI ISHINO et al.
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR POL I TYPE
TITLE OF INVENTION: DNA POLYMERASE
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS: 17
CORRESPONDENCE ADDRESS: 17
CORRESPONDENCE ADDRESS: 17
CORRESPONDENCE ADDRESS: 17
COUNTRY: Weahington
STATE: BOS Fifteenth Street, N.W., #700
CITY: Weahington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: DisplayWrite
CURRENT APPLICATION DATA:
FILING DATE: US/DATE: US/08/208,036
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SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acid residues
TYPE: amino acid stranscent strength stranscent strength s
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/887,282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
ATORNEYAGENT INFORMATION:
NAME: WATERN N. Check, Jr.
REGISTRATION NUMBER: 33,367
REPERSTECK/POCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
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LOCATION:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION:
PUBLICATION INFORMATION:
AUTHORS:
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CHROMOSOME/SEGMENT:
MAP POSITION:
UNITS:
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INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
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IMMEDIATE SOURCE:
LIBRARY:
CLONE:
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ORIGINAL SOURCE:
ORGANISM:
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TISSUE TYPE:
CELL TYPE:
CELL LINE:
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US-08-208-036-17
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Pred. No. 19;
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Fatent No. 5753482
GENERAL INFORMATION:
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR TITLE OF INVENTION: POL I TYPE DNA POLYMERASE
TITLE OF INVENTION: POL I TYPE DNA POLYMERASE
TITLE OF INVENTION: POL I TYPE DNA POLYMERASE
TORRESPONDENCES:
ADDRESSEE: Wenderoth, Lind & Ponack
STREET: 805 Fifteenth Street, N.W., #700
CITY: Mashington
STATE: D.C.
COUNTY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 1.44 mb
COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 5.1+
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/428,823
FILING DATE: APTIL 25, 1995
CLASSIFICATION: WOBER:
FILING DATE:
ATTORNEY AGENT INFORMATION:
NAME: MATCHARY JACOB
NAME: MATCHA
                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
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TYPE: amino acid
STRANDEDNESS: single
DOCUMENT NUMBER:
FILING DATE:
PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
US-08-208-036-17
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                                                                                                                                                                                                                                                                     32.5%;
81.8%;
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Best Local Similarity 81.8
Matches 9; Conservative
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MOLECULE TYPE: protein
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
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314 PDTKKVHTIFN 324
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FRAGMENT TYPE:
ORIGINAL SOURCE:
ORGANISM:
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TISSUE TYPE:
CELL TYPE:
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US-08-428-823-17
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Gaps
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Patent No. 5436326
GENERAL INFORMATION:
APPLICANT: COSHIZUMI ISHINO et al.
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR POL I TYPE
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Wenderoth, Lind & Ponack
STREET: 805 Fifteenth Street, N.W., #700
CITY: Washington
STATE: D.C.
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Pred. No. 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
COMPUTER TYPE: Diskette, 5.25 inch, 500 kb
COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
                                                                                                                                                                                                                          0; Mismatches
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/887,282
FILING DATE:
ATTOCNEY AGENT INFORMATION:
NAME: WALTEN M. Cheek, Jr.
REGISTRATION NUMBER: 33,367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: DisplayWrite
CURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/208,036
FILING DATE:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: 14: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                Query Match 32.5%;
Best Local Similarity 81.8%;
Matches 9; Conservative
    INFORMATION FOR SEQ ID NO: 2:
                                       : 876 amino acids amino acids
                       SEQUENCE CHARACTERISTICS:
LENGTH: 876 amino acid
                                                                         ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-633-476-2
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597 PDTKKVHTIFN 607
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ORIGINAL SOURCE:
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TISSUE TYPE:
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US-08-208-036-14
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GENERAL INFORMATION
GENERAL INFORMATION
APPLICANT: Swaminathan, Neela
APPLICANT: Wilkosz, Richard K.
TITLE OF INVENTION: BIOLOGICALLY ACTIVE FRAGMENT OF
TITLE OF INVENTION: BIOLOGICALLUS STEARCHERMOPHILUS DNA POLYMERASE
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDIRESS:
ADDRESSEE: MAISHAIL, O'TOOLE, GETSTEIN, MUTRAY & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STREET: Illinois
COMPUTER: Illinois
COMPUTER: Illinois
COMPUTER: IBM PC compatible
OPERATION SYSTÈM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DABER: US/08/633,476
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Pred. No. 19;
0; Mismatches 2; Indels
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NAME: Pochopien, Donald J.
REGISTRATION NUMBER: 32,167
REFERENCE/DOCKET NUMBER: 28003/32630
TELECOMMUNICATION INFORMATION:
TELECHOM: 312/474-6300
TELERAX: 312/474-648
TELEX: 25-3856
                                                                                                                                                                                                                                                                                                                                                                                                                             ) DATE:
) DOCUMENT NUMBER:
) FILING DATE:
PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
US-08-428-823-17
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81.8%; Pred
0;
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US-08-633-476-2
Sequence 2, Application US/08633476
Patent No. 5830114
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 32.5
Best Local Similarity 81.8
Matches 9; Conservative
                                                                                                                                                                              FEATURE:
NAME/KEY:
LOCATION:
IDENTIFICATION METHOD:
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PUBLICATION INFORMATION:
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                                                                               CLONE:
POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
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314 PDTKKVHTIFN 324
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CELL LINE:
ORGANELLE:
IMMEDIATE SOURCE:
LIBRARY:
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                                                                                                                                                                                                                                                                                                                                             JOURNAL:
VOLUME:
ISSUE:
                                                                                                                                                                                                                                                                                                          AUTHORS:
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                                                                                                                                                               UNITS:
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RESULT 7
US-08-996-679-63
is Sequence 63, Application US/08996679
j Faquence 63, Application US/08996679
j Patent No. 6169071
j GENERAL INFORMATION:
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING
TITLE OF INVENTION: CELL ADHESION
NUMBER OF SEQUENCES: 63
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 49; DB 1; Length 877;
Pred. No. 31;
0; Mismatches 2; Indels
     INFORMATION FOR SEQ 1D NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 877 amino acid residues
TYPE: amino acid
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PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
US-08-428-623-14
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81.8%;
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IDENTIFICATION METHOD:
OTHER INFORMATION:
PUBLICATION INFORMATION:
AUTHORS:
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Best Local Similarity 81.8
Matches 9; Conservative
                                                                                                                     single
                                                                                                                                            TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                      INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHROMOSOME/SEGMENT:
MAP POSITION:
UNITS:
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STATE: Washington
COUNTRY: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE TYPE:
CELL TYPE:
CELL TYPE:
ORGANELLE:
IMMEDIATE SOURCE:
LIBRARY:
CLONE:
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                                                                                                                                                                                                HYPOTHETICAL:
ANTI-SENSE:
FRAGMENT TYPE:
ORIGINAL SOURCE:
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                                                                                                                                                                                                                                                                                                                                                                                                                            HAPLOTYPE:
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Pred. No. 31;
0; Mismatches 2; Indels
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GENERAL INFORMATION:
APPLICANT: YOSHIZUMI ISHINO et al.
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR INVENTION: POLI I TYPE DNA POLYMERASE
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
STREET: 805 FIfteenth Street, N.W., #700
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 2005
COMPUTER: IBM COMPATIBLE FORM:
MEDIUM TYPE: DISKETC, 3.5 inch, 1.44 mb
COMPUTER: IBM COMPATIBLE
OPERATING STATEM: MS-DOS
SOFTWARE: WORDPERFECT 5.1+
CURRENT APPLICATION DATA:
APPLICATION NUMBER: G1995
CLASSIFICATION: 435
PRICE APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER:
STAIN APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 14, Application US/08428823
Putent No. 5753482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
US-08-208-036-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Matthew Jacob
REGISTRATION NUMBER: 25,154
REFERNCE/DOCKET NUMBER:
TELECOMMINICATION:
TELECOMMINICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32.5%;
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                                                                                                                                                                                                                                             NAME/KEY:
LACATION:
LICKATION:
LICKATION:
OTHER INFORMATION:
PUBLICATION INFORMATION:
AUTHORS:
TITLE:
JOURNAL:
VOLUME:
ISSUE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match

Host Local Similarity 81.8

Matches 9; Conservative
                                                                                                    POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP FOSITION:
UNITS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOCUMENT NUMBER:
ORGANELLE:
IMMEDIATE SOURCE:
LIBRARY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-428-823-14
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Gaps ö Ŋ

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APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TILE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING NEURITE OUTGROWTH
FILE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING NEURITE OUTGROWTH
FILE REFERENCE: 100086 401C3
CURRENT APPLICATION NUMBER: US/09/115,395A
CURRENT FILING DATE: 1998-07-14
EARLIER FILING DATE: 1997-12-23
EARLIER FILING DATE: 1997-07-11
EARLIER FILING DATE: 1997-07-11
EARLIER APPLICATION NUMBER: 06/021,612
EARLIER FILING DATE: 1996-07-12
NUMBER OF SEQ ID NOS: 77
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 23
LENGTH: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Doherty, Patrick
APPLICANT: Blaschuk, Orest W.
APPLICANT: Blaschuk, Dest W.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ADHESION MOLECULE
TITLE OF INVENTION: FUNCTION
FILE REFERENCE: 100086.403
CURRENT APPLICATION NUMBER: US/09/113,977C
CURRENT FILING DATE: 1998-07-10
NUMBER OF SEQ ID NOS: 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Description of Artificial Sequence: Solid Phase ; OTHER INFORMATION: Synthesis US-09-113-977C-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Solid Phase
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                                                                           Score 48; DB 4; Length 17;
Pred. No. 0.43;
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Pred. No. 0.43;
                                                                                                                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Description of Artificial Sequence:; OTHER INFORMATION: Synthesis
US-09-115-395-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 68, Application US/09113977C
; Patent No. 6277824
                                                                                                                                                                                                                                                                                                                 Sequence 23, Application US/09115395A Patent No. 6207639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                             31.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PatentIn Ver. 2.0
                                                                             Query Match 31.8
Best Local Similarity 43.8
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 31.8
Best Local Similarity 43.8
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |::||::|::|
| IWKHKGRDVILKKDVR 16
                                                                                                                                                               11 IFNYKGKNVLINKDIR 26
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| IWKHKGRDVILKKDVR 16
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                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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           US-08-939-853A-14
                                                                                                                                                                                                                                                                                             US-09-115-395-23
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 17
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Patent No. 6203788
GENERL INFORMATION:
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR REGULATING
TITLE OF INVENTION: CELL ADHESION
NUMBER OF SEQUENCES: 30
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4; Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Indels
COMPUTER READABLE FURM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/996,679
FLING DATE: 23-DEC-1997
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Maki, Daild J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 100086.401C1
TELECOMMUTICATION INFORMATION:
TELECOMMUTICATION INFORMATION:
TELECOMMUTICATION INFORMATION:
TELECOMMUTICATION INFORMATION:
TELECOMMUTICATION OF 33:
SEQUENCE CHARACTERISTICS:
FENGTH: 17 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 0.437; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/939,853A
FILING DATE: 29-SEP-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 32,391
REGISTRENCE/DOCKET NUMBER: 100086.402
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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TELEPAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31.8%;
43.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 17 amino acids
TYPE: amino acid
STRANDEDNESS:
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| IWKHKGRDVILKKDVR 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Seattle
STATE: Washington
COUNTRY: USA
ZIP: 98104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TOPOLOGY: linear
US-08-996-679-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-939-853A-14
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US-08-946-967-2

Sequence 2, Application US/08946967

Patent No. 5882869

GENERAL NO. 5882869

APPLICANT: Potter, Sharon L

APPLICANT: Ward, Eric R

TITLE OF INVENTION: Dlant Adenylosuccinate Synthetase and TITLE OF INVENTION: DNA COGING Therefor NUMBER OF SEQUENCES: 4 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 47; DB 1; Length 490;
Pred. No. 31;
5; Mismatches 12; Indels
                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.30B CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/565,655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATCHIIN Release #1.0, Version #1.30B
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/946,967
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              540 White Plains Rd., POB 2005
                                                                                                                                                                                                                                                                        CLASSIFICATION: 210
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/361,611
FILING DATE: 12-DEC-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CIBA-GEIGY Corporation
                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Elmer, James Scott
REGISTRATION NUMBER: 36,129
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8614
TELEFAX: (919) 541-8689
                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8614
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31.1%;
28.6%;
                                                                                                                                                                                                                                                                                                                                                                            NAME: Elmer, James Scott REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. 7 Skyline Drive
Hawthorne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 490 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS
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MOLECULE TYPE: protein
US-08-565-655-2
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MEDIUM TYPE: Floppy
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STREET: 540
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Best Local Similarity
Matches 10; Conserv
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                                                                        USA
                                                                                                                                                                                                                                                     FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
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                                                                                                                                                                                                                                                                                                                          APPLICANT: Potter, Sharon L
APPLICANT: Potter, Sharon L
APPLICANT: Ward, Eric R
TITLE OF INVENTION: Plant Adenylosuccinate Synthetase and
TITLE OF INVENTION: DNA Coding Therefor
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
STREET: 7 Skyline Drive
CITY: Hawthorne
STATE: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/08565655
Patent No. 5688939
GENERAL INFORMATION:
APPLICANT: Potter, Sharon L
APPLICANT: Ward, Eric R
TITLE OF INVENTION: Plant Adenylosuccinate Synthetase and
TITLE OF INVENTION: DA Coding Therefor
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Ciba Patent Department
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 490;
                                                 Score 48; DB 4; Length 17; Pred. No. 0.43;
                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
ZIP: 10532
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FLOPPY disk
COMPUTER: PLOPPY disk
COMPUTER: PLOPPY disk
SOFTWARE: PLOPPY disk
SOFTWARE: PLOPPY disk
SOFTWARE: PLOPPY disk
CURRENT APPLICATION DATA:
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Pred. No. 31;
5; Mismatches
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                                                                                       7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/361,611 FILING DATE:
                                                                                                                                                                                                                                                               Sequence 2, Application US/08361611 Patent No. 5519125 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Elmer, James Scott
REGISTRATION NUMBER: 36,129
TELECOMMULICATION INFORMATION:
TELEPHONE: (919) 541-8614
INFORMATION FOR SEQ ID NO: 2:
SEQUIENCE CHARACTERISTICS:
LENGTH: 490 amino acids
                                               31.8%;
43.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31.1%;
28.6%;
                             Query Match
Best Local Similarity 43.8:
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Best Local Similarity 28.6
Matches 10; Conservative
                                                                                                                                                     1 IWKHKGRDVILKKDVR 16
                                                                                                                            11 IFNYKGKNVLINKDIR 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ) MOLECULE TYPE: protein US-08-361-611-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 536
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                                                                                                                                                                                                                                                 US-08-361-611-2
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98104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: CARLOW, CLOTILDE K.S.
APPLICANT: PERLER, FRANCINE B.
APPLICANT: HONG, XIQIANG
APPLICANT: MEJIA, JHON S.
TITLE OF INVENTION: NOVEL PROTEIN FROM DIROFILARIA IMMITIS
TITLE OF INVENTION: AND METHOD FOR IMMUNODIAGNOSIS OF HEARTWORM IN MAMMALS
CORRESPONDENCE HORRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                               DB 2; Length 490;
                                                                                                                                                                             Score 47; DB 2; Length 490
Pred. No. 31;
5; Mismatches 12; Indels
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Pred. No. 18;
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REGISTRATION NUMBER: 30901
REFERENCE/DOCKET NUMBER: NEB-112C-PCT
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STREET: 32 TOZER ROAD
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CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/420,976
FILING DATE: 10-APR-1995
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 01915
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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US-08-836-236-9
'Sequence 9, Application US/08836236
'Patent No. 6103484
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TELEPHONE: (508) 927-5054
TELEFAX: (508) 927-1705
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                          31.1%; 28.6%;
                                                                                                                                                                                                                                                             1 CGPGTKKVHVIFNYKGKNV----
                SEQUENCE CHARACTERISTICS:
LENGTH: 490 amino acids
TYPE: amino acid
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Best Local Similarity 28.6
Matches 10; Conservative
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INFORMATION FOR SEQ ID NO:
                                                                       TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-946-967-2
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STATE: MASSACHUSETTS
COUNTRY: US
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Best Local Similarity
Matches 11; Conserva
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Sequence 67, Application US/08975762
Patent No. 6207169
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Reed, Steven G.
APPLICANT: Houghton, Raymond
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR THE DIAGNOSIS AND
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
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Pred. No. 16;
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                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NOTA: APPLICATION NUMBER: US/08/975,762 FILING DATE: 21-MAR-1997
                                                                                                                                                                                    ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
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SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
REGIETRATION NUMBER: 31,392
REFERENCE/COCKET NUMBER: 2101
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3;
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Best Local Similarity 37.5%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : 113 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        206-682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , MOLECULE TYPE: protein US-08-975-762-67
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Job time: 71 sec
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CITY: Seattle
STATE: Washington
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TOPOLOGY: 111
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10.565 Million cell updates/sec
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Sequence 14, Appl
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/cgn2_6/ptodata/2/laa/6B_COMB.pep:*
/cgn2_6/ptodata/2/laa/pcTUS_COMB.pep:*
/cgn2_6/ptodata/2/laa/pcTUS_COMB.pep:*
                    GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
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US-09-115-395-23
US-09-113-395-23
US-08-924-183-10
US-08-488-364-10
US-08-105-25-157
US-08-175-816-2
US-08-875-816-2
US-08-875-816-7
US-08-885-286-78
US-07-901-707-7
US-08-425-336-7
US-08-477-484B-7
US-08-477-484B-7
US-08-477-484B-7
US-08-477-484B-7
US-08-8136-7
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US-08-696-268B-2
US-09-382-256-2
US-09-395-115-2
PCT-US94-11328A-4
PCT-US94-05467-2
US-08-743-168B-43
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Maximum Match 100%
Listing first 45 summaries
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    protein search, using sw model

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Gapop 10.0 , Gapext 0.5
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length: 2000000000
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Maximum DB
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7356-15 7356-11 7358-11 7358-18 951-8 951-8 1938-16 7738-16 7738-16 7738-16 7738-32 7738-32 1938-32 1938-32 1938-32	s DS	72;
US-08-857-076-15 US-08-158-735A-11 US-08-357-533A-8 US-08-459-009-8 US-08-4459-009-8 US-08-91-18 US-08-91-18 US-08-91-19 US-08	ALIGNM 5679 S AND ME 5510N ELP ET, 701 E1.0, V 996,679	Score 48; DB Pred. No. 0.0 7; Mismatches
44000440000000000400	Drest W.  Orest W.  ComPounds A  G3  S: ComPounds A  G3  BERRY LLP  Data J  W: W: Release #1  ATA: PR-DoS/MS-D  Release #1  ATA: Release #1  NATA: Release #1  ATO: Release #1	
33 31 32 33 34 34 34 34 34 34 34 34 34 34 34 34	S HAZIS BB DOTESTED BZ.OSO	50.0%, 43.8%; vative DIR 17  :  CDR 16
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00000000000000000000000000000000000000	RESULT 1 US-08-996-6 PAPLIC PAPLIC PAPLIC TITLE TITLE TITLE TITLE TITLE TOWNES CORRES	Query Me Best Loc Matches Qy 2
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TYPE: PRT
ORGANISM: Artificial Sequence
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Best Local Similarity
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                                                                          FEATURE:
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APPLICANT: Blaschik, Orest W.
APPLICANT: Gour, Barbara J.
APPLICANT: Gour, Barbara J.
APPLICANT: Gour, Barbara J.
APPLICANT: GOUR, Barbara J.
APPLICANT: GOUR, BARBARION
TITLE OF INVENTION: CELL ADHESION
NUMBER OF SEQUENCES: 30
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
STATE: Machigen
COUNTRY: Washington
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Rolease #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/939,853A
FILLING DATE: 29-SEP-1997
CLASSIFICATION: 435
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NAME: Maki, David J.
REGISTRATION NUMBER: 100086.402
REFERENCE/DOCKET NUMBER: 100086.402
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 amino acids
TYPE: amino acids
STRANDEDNESS:
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                                                                                                     Sequence 14, Application US/08939853A Patent No. 6203788
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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Best Local Similarity 43.8
Matches 7; Conservative
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                                                              US-08-939-853A-14
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LENGTH: 17
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Patent No. 6277824
GENERAL INFORMATION:
APPLICANT: Dolnerty, Patrick
APPLICANT: Blaschuk Orest W.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ADHESION MOLECULE
TITLE OF INVENTION: PUNCTION
FILE REFERENCE: 100086.403
CURRENT PILING DATE: 1998-07-10
CURRENT FILING DATE: 1998-07-10
CURRENT FILING DATE: 1998-07-10
SOFTWARE: Patentin Ver. 2.0
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                                                                                                                                                       Gaps
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OTHER INFORMATION: Description of Artificial Sequence: Solid Phase; OTHER INFORMATION: Synthesis
US-09-115-395-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Description of Artificial Sequence: Solid Phase ; OTHER INFORMATION: Synthesis
US-09-113-9770-68
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APPLICANT: Elledge, Stephen J.
APPLICANT: Sanchez, Yolanda
TITLE OF INVENTION: MAMMALIAN CHECKPOINT GENES AND PROTEINS
FILE REFERENCE: 120541-1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 44; DB 4; Length 496;
Pred. No. 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 48; DB 4; Length 17; Pred. No. 0.072;
                                                                                                             Length 17
                                                                                                                                                     2; Indels
                                                                                                         Score 48; DB 4;
Pred. No. 0.072;
7; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 10, Application US/08924183A ; Patent No. 6218109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT; ORGANISM: Schizosaccharomyces pombe
US-08-924-183-10
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                                                                                                         50.0%;
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                                                                                   Ouery Match
Best Local Similarity 43...
7; Conservative
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Best Local Similarity 43.8
Matches 7; Conservative
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| IWKHKGRDVILKKDVR 16
                                                                                                                                                                                          2 IFNYKGKNVLINKDIR 17
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| IWKHKGRDVILKKDVR 16
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Gaps

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GENERAL INFORMATION:
APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
RAPPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
                                                                                                                                                                                     Score 43; DB Pred. No. 2.7;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: No. 6171864tenburg, Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 750027.401
TELECOMMUNICATION:
TELECHONE: (206-622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 9 ...
US-08-378-761A-78 ...
Sequence 78, Application US/08378761A ; Patent No. 5635384 ...
GENERAL INFORMATION:
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Patent No. 6171864
                                                                                                                                                                                   44.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (206)-682-6031
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                   LENGTH: 76 amino acids TYPE: amino acid
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Best Local Similarity 47.1
Matches 8; Conservative
                                                                                                                                                                                                                               6; Conservative
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  SEQUENCE CHARACTERISTICS:
                                                           TOPOLOGY: unknown MOLECULE TYPE: protein FRAGMENT TYPE: internal US-08-117-952-757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; MOLECULE TYPE: protein US-08-675-816-2
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54 KGKNIVIHRDLK 65
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Best Local Similarity
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US-08-675-816-2
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APPLICANT: Evans, Glen A.
APPLICANT: Evans, Glen A.
APPLICANT: Smith, Michael W.
APPLICANT: Smith, Michael W.
TITLE OF INVENTION: METHOD FOR GENERATION OF SEQUENCE:
TITLE OF INVENTION: SAMPLED MAPS OF COMPLEX GENOMES
NUMBER OF SEQUENCES: 797
CORRESPONDENCE ADDRESS:
ADDRESSE: Pretty, Schroeder, Brueggemann & Clark
STREET: A44 South Flower Street, Suite 2000
CITY: Los Angeles
STATE: CA
                                                                                                                                                       US-09-488-364-10
Sequence 10, Application US/09488364
Sequence 10, Application US/09488364
Sequence 10, Application US/09488364
SERENT NOTE 100:
APPLICANT: Elledge, Stephen J.
APPLICANT: Sanchez, Yolanda
TITLE OF INCENTION: MAMMALIAN CHECKPOINT GENES AND PROTEINS
FILE REFERENCE: 120541-1013
CURRENT APPLICATION NUMBER: US/09/488,364
CURRENT FILING DATE: 2000-01-12
SOFTWARE: PATENTIN VOS: 15
SOFTWARE: PATENTIN VOY: 2.0
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Pred. No. 16;
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/117,952
FILING DATE: U7-SEP-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/471
FILING DATE: 15-JUN-1993
ATTORNEY/AGENT INFORMATION:
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 31,192
REFERENCE/DOCKET NUMBER: P41 9423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Schizosaccharomyces pombe US-09-488-364-10
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Patent No. 5851760
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 757:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match
Best Local Similarity 46...
7; Conservative
7; Conservative
                                                                 :|:||||: |:| : | : | 151 LFSYKGKSRLLNSPV 175
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161 LFSYKGKSRLLNSPV 175
                                         2 IFNYKGKNVLINKDI 16
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  Matches
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GENERAL INFORMATION:
APPLICANT: Bernhard, Susan L.
APPLICANT: Bertre', Marc D.
APPLICANT: Carroll, Steve F.
APPLICANT: Carroll, Steve F.
APPLICANT: Carroll, Steve F.
TITLE OF INVENTION: Materials Comprising and Methods of
TITLE OF INVENTION: Composition and Use for Ribosome-Inactivating Proteins
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 250;
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2 ID: 60603
COMPUTER FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: TBM PC COMPATIBLE
COMPUTER: PATEMING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATEMING NET Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/901,707
PTING DATE: 19920619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Bicknell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: Two First National Plaza, 20 South Clark
STREET: Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 41; DB 1;
Pred. No. 23;
1; Mismatches
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CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/787,567
FILING DATE: UG NOV-1991
ATTORNEY/AGENT INTORMATION:
NAME: NO. 3376546and, Greta E.
REGISTREATION NUMBER: 35,302
REFERENCE/DOCKET NUMBER: 27129/30910
TELECOMMUNICATION INFORMATION:
TELECHAN: (312) 346-5750
TELERAX: (312) 984-5750
TELEX: 25-3856
                                                            CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/378761
FILING DATE: 26-JAN-1995
ATTORNEY/AGENT INFORMATION:
NAME: BORDOCKI, NAMER: 33651
REFERENCE/DOCKET NUMBER: 33621
                         US/08/485,286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7, Application US/07901707
Patent No. 5376546
                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELEPHONE: (317) 337-4846
INFORMATION FOR SEQ ID NO: 78:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42.78;
                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 250 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match
Best Local Similarity 40.00
Best Local Similarity 60.00
CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-485-286-78
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52 LFNYDGKTITVAVDV 66
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                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chicago
Illinois
                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: I
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-07-901-707-7
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APPLICANT: WALSH, TERENCE A
APPLICANT: WALSH, TERENCE A
APPLICANT: WORGAN, ALICE ER
TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD OF
TITLE OF INVENTION: USING
NUMBER OF SEQUENCES: 81
CORRESPONDENCE ADDRESS:
                  APPLICANT: HEY, TIMOTHY D
APPLICANT: MORGAN, ALICE ER
TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD OF
TITLE OF INVENTION: USING
NUMBER OF INVENTION: USING
CORRESPONDENCES: 81
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IRM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATINE STAM PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/378,761A FILING DATE: 26-JAN-1995 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREE: ANDREA T. BORUCKI STREET: 9330 ZIONSVILLE ROAD CITY: INDIANAPOLIS STATE: IN COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 78, Application US/08485286
Putent No. 5646026
Patent No. 5646026 5646119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: BORUCKI, ANDREA T
REGISTRATION NUMBER: 33651
REFERENCE/DOCKET NUMBER: 3827:
TELEPHONE: (317) 337-4846
INFORMATION FOR SEQ ID NO: 78:
SEQUENCE CHARACTERISTICS:
LENGTH: 250 antho acids
TYPE: amino acid
                                                                                                                                                                         ADDRESSER: ANDREA T. BORUCKI
STREET: 9330 ZIONSVILLE ROAD
CITY: INDIANAPOLIS
STATE: IN
COUNTRY: US
WALSH, TERENCE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42.7%;
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Rest Local Similarity 40.0
Matches 6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; MOLECULE TYPE: protein US-08-378-761A-78
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52 LFNYDGKTITVAVDV 66
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
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Gaps

Pred. No.

40.08;

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Best Local Similarity
Matches 6; Conserva
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                                                                                                                                                                     RESULT 13
US-08-425-336-7
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APPLICANT: Bernhard, Susan L.
APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Lane, Julie A.
APPLICANT: Led., Shau-Ping
TITLE OF INVENTION: Materials Comprising and Methods of
TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                       Score 41; DB 1; Length 263;
Pred. No. 25;
4; Mismatches 5; Indels
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MEDIUM TYPE: Floppy disk

COMPUTER: The PC compatible

COMPUTER: The PC compatible

COMPUTER: The PC compatible

COPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/988,430

FLING DATE: 19921209

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/901,707

FILING DATE: 19-7UN-1992

PROR APPLICATION DATA:

APPLICATION NUMBER: US 07/787,567

FILING DATE: 04-NOV-1991

ATTORNEY AGENT INFORMATION:

NAME: NO. 5416202and, Greta E.

REGISTRATION NUMBER: 3330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Bicknell STREET: Two First National Plaza, 20 South Clark STREET: Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31133
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7, Application US/07988430 Patent No. 5416202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 31
TELECOMMUNICATION INFORMATION:
TELEPHONE: (312) 346-5750
TELEFAX: (312) 984-9740
                                                                                                                                                                                     42.7%;
  INFORMATION FOR SEG ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 263 amino acids TYPE: AMINO ACID
                                                                                                                                                                                       Query Match 42.7
Best Local Similarity 40.0
Matches 6; Conservative
                                                                            ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-901-707-7
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52 LFNYDGKTITVAVDV 66
                                                                                                                                                                                                                                                                       2 IFNYKGKNVLINKDI 16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREE: CITY: Chicago STATE: Illinois
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US-07-988-430-7
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42.7%; Score 41; DB 1; Length 263;

Query Match

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                      Gaps
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Carroll, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribsome-Inactivating
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 140
CORRESPONDENCE ADDRESS:
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                      Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FO Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
GURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/425,336
FILING DATE: 18 AAPR-1995
CLASSIFICATION: 530
                    5,
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25;
ed. No. 25;
Mismatches
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 18-APR-1995
CLASSIPTCATION: 530
PRIOR APPLICATION: 530
PRIOR APPLICATION NATA:
APPLICATION NUMBER: 08/064,691
FILING DATE: 12-MAY-1993
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7, Application US/08488113B Patent No. 5744580
                                                                                                                                                                                               Sequence 7, Application US/08425336 Patent No. 5621083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P-36,989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Meyers, Thomas C.
REGISTRATION NUMBER: 9-36,9
REFERENCE/DOCKET NUMBER: 31
TELECOMMUNICATION INFORMATION:
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TELEFAX: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; MOLECULE TYPE: protein US-08-425-336-7
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52 LFNYDGKTITVAVDV 66
                                                         2 IFNYKGKNVLINKDI 16
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52 LFNYDGKTITVAVDV 66
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                                                                                                                                                                                                                                                                                                                                                                                                                                   Chicago
: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: Illinois
COUNTRY: USA
ZIP: 60606-6402
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Best Local Similarity
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US-08-488-113B-7
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us-09-828-000-6.rai

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Search completed: January 9, 2002, 14:59:44
Job time: 71 sec
                              CORRESPONDENCE ADDRESS:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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GENERAL INCOMATION:
APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Studnika, Gary M.
APPLICANT: Studnika, Gary M.
APPLICANT: Studnika, Gary M.
            APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Cardoll, Stephen F.
APPLICANT: Studinka, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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Pred. No. 25;
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                                                                                                                                                                                                    NAME: MCNUCALLS, Jance M.
REGISTRATION NUMBER: 32,918
REGISTRATION NUMBER: 11022US07/200-70.P3.C2A
TELECHONICATION INFORMATION:
TELEPAX: 312/707-889
TELEPAX: 312/707-9155
TELEPAX: 550 388-1248
INFORMATION FOR SEQ ID NO: 7:
                                                                                                               ANDRESSE: McAdrews, Held & Malloy, Ltd.
STRERT: 500 West Madison Street, 34th floor
CITY: Chloago
STATE: 1111nois
ZIATE: USA
ZIP: 60661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4; Mismatches
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; Sequence 7, Application US/08477484B
; Patent No. 5756699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42.78;
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LENGTH: 263 amino acids
TYPE: amino acid
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Hest Local Similarity 40.0
Matches 6; Conservative
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52 I.FNYDGKTITVAVDV 66
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Pred. No. 25;
1; Mismatches 5; Indels
                                                                                                                                                                                                                                                                           MEDIUM TYPE: FLOPDY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,484B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 530
PRIOR APPLICATION NUMBER: US 08/425,336
FILING DATE: 18-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/064,691
FILING DATE: 12-MAY-1993
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 07/988,430
FILING DATE: 09-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/991,707
FILING DATE: US-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/991,707
FILING DATE: US-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/971,567
FILING DATE: US-JUN-1992
ATTORNEY/AGENT INFORMATION:
DATE: MCMICALION:
DAME: MCMICADISA: Janet M.
DAME: MCMICADISA: JANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 32,918
REFERENCE/DOCKET NUMBER: 11022US07/200-70.P3.C2A
TELECOMMUNICATION INFORMATION:
E: McAndrews, Held & Malloy, Ltd.
500 West Madison Street, 34th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: 312/707-8889
TELEFAX: 312/707-9155
TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 40.0.
Best Local 6, Conservative
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 IFNYKGKNVLINKDI 16
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52 LFNYDGKTITVAVDV 66
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: USA
    ADDAL
STREET: SOC
TTW: Chicago
                                                                                                                                                               COUNTRY: UZIP: 60661
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Best Local Similarity
US-08-675-816-2
 Query Match
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Sequence 6, Appli
Sequence 16, Appli
Sequence 16, Appl
Sequence 374, Appl
Sequence 6, Appli
                                                              Search time 38.34 Seconds (without alignments) 20.543 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 14, P
Sequence 327,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 23,
Sequence 18,
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Sequence 14,
Sequence 23,
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Sequence 3
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                                                                                                                                                                                                                                                                                       /cgn2_6/ptodata/2/laa/5A_COMB.pep:*
/cgn2_6/ptodata/2/laa/5B_COMB.pep:*
/cgn2_6/ptodata/2/laa/6A_COMB.pep:*
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/cgn2_6/ptodata/2/laa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/laa/PCTUS_COMB.pep:*
                  Compugen Ltd
                                                                                                                       1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-675-816-6
US-08-307-499-28
US-08-996-679-63
US-08-939-853A-14
US-09-115-395-23
US-09-115-395-23
US-09-085-603B-3
US-09-085-603B-3
US-09-081-897-7
US-09-081-897-7
US-09-091-897-7
US-09-091-897-7
US-09-906-865-3
US-08-906-865-3
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US-08-701-191A-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -08-292-549-6
-09-006-353A-14
                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
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US-08-467-781-2
                                                                                                                                                                      212252 seqs, 22503292 residues
          GenCore version
Copyright (c) 1993 - 2000
                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                               9, 2002, 14:59:44
                                             OM protein - protein search, using sw model
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                                                                                                                                                                                                             length: 0
length: 2000000000
                                                                                                     US-09-828-000-7
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Match Length
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                                                                                                                                                                                                          Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
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                                                               Run on:
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Sequence 2, Application US/08675816
Patent No. 6171864
GENERAL INFORMATION:
APPLICANT: Coughlan, Sean J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
   2, Appli
2, Appli
22, Appli
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6, Appli
6, Appli
7, Appli
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                                                                                                                       Sequence 2
Sequence 4
Sequence 5
Sequence 5
Sequence 2
Sequence 2
Sequence 2
Sequence 2
Sequence 3
Sequence 3
Sequence 3
Sequence 3
Sequence 3
Sequence 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
CITY: Seattle
CITY: Seattle
CITY: Seattle
COUNTRY: Washington
COUNTRY: W.S.A.
ZIP: 98104-7092
COMPUTER: ISP POPPY disk
COMPUTER: IBM PC COMPATIBLE
CORPUTER: PATELINE PCDS/MS-DOS
SOFTWARE: PATEHLIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
US-08-195-487-2
US-08-483-924-2
PCT-US93-06160-2
US-08-162-809-22
US-08-162-809-4
US-08-162-809-4
US-08-61-809-20
US-08-477-346-54
US-08-477-346-54
US-08-440-815-2
US-08-440-815-2
US-08-440-815-2
US-08-440-645A-30
US-08-449-645A-30
US-08-673-789-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 IFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (206-622-4900
TELEFAX: (206)-682-6031
INFORMATION FOR SEQ 1D NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: No. 6171864tenburg, Carol
REGISTRATION NUMBER: 39,317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : 415 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-675-816-2
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Gaps
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APPLICANT: Will and Bladio
APPLICANT: Vi uela, Eladio
APPLICANT: Vi uela, Eladio
APPLICANT: Gibbs, E.P.J.
TITLE OF INVENTION: Use of Recombinant Swine Poxvirus as TITLE OF INVENTION: Live Vaccine Vector
CORRESPONDENCE ADDRESS:
ADDRESSEE: ADDRESS:
ADDRESSEE: David R. Saliwanchik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4; Length 542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Indels
SUFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
ATTONEY/AGENT TWITTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: U.S.A.
ZIP: 32606
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/307,499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 58; DB 4;
Pred. No. 0.85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: David R. Saliwanchik
STREET: 2421 N.W. 41st Street, Suite A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4; Mismatches
                                                                                                                                                                                     ATORNEY/AGENT INFORMATION:
NAME: No. 6171864 tenburg, Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 750027.401
TELEPHONE: (206.622-4900
TELEPHONE: (206.622-4900
TELEPRAX: (206)-68-6031
INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARCTERISTICS:
LENGTH: 542 amino acids
TYPE: amino acid
TOPOLOGY: 11near
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: SAllwanchik, David R.
RECISTRATION NUMBER: 31,794
REFERENCE/DOCKET NUMBER: UF35.1.FWCC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/908,241
FILING DATE: 1-JUL-1992
PRIOR APPLICATION NUMBER: US 07/908,630
FILING DATE: 29-JUN-1992
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/342,212
FILING DATE: 21-APR-1992
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 28, Application US/08307499; Patent No. 5651972; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30.7%;
60.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 60.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE: protein US-08-675-816-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Gainesville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Florida
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-307-499-28
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Patent No. 6171864

GENERAL INFORMATION

APPLICANT: COUGHAIN, Sean J.

APPLICANT: Winfrey, Jr., Ron J.

TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND USES

TITLE OF SEQUENCES: 16

CORRESPONDENCE ADDRESS:

ADDRESSEE: Seed and Berry

STREET: 701 Fifth Ave. Suite 6300

CITY: Seattle

STRATE: Washington

CITY: Seattle

STATE: Washington

COUNTEY: US.A.

ZIP: 98104-7092

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Bergeron, John J.M.
APPLICANT: Thomas, David Y.
APPLICANT: Thomas, David Y.
APPLICANT: Wade, INTERPRETED BY THE OF TITLE OF INVENTION: METHODS OF DETECTION AND TREATMENT OF TITLE OF INVENTION: PROTEIN TRAFFICKING DISORDERS AND INCREASING SECRETORY TITLE OF INVENTION: PROTEIN PRODUCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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Pred. No. 0.16;
6; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        CCUNTRY: US
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,362
FILING DATE: 25-AUG-1994
CLASSIFICATION NUMBER: 05/06/296,362
FILING DATE: 25-AUG-1994
ATCHNEY/AGENT INFORMATION:
NAME: DATE: MANAY S.
REGISTRATION NUMBER: 690066.401C1
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
TELEFEX: 37.23836
TELERX: 37.3836
INFORMATION FOR SEQ ID NO: 2:
SECHENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        204 IFRHKNPKTGVYEEKHAKRPDADLKTYFTDKKTHLYTLILNPDN 247
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                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS: 3
ADDRESSE: SEED and BERRY
STREET: 6300 Columbia Center, 701 Fifth Avenue
STREET: Scattlc
STATE: Washington
COUNTRY: US
                                                                                              Sequence 2, Application US/08296362
Patent No. 5691306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33.38;
34.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
TOPOICACY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 33.3
Best Local Similarity 34.1
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; MOLECULE TYPE: protein US-08-296-362-2
                                                                         -08-296-362-2
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0
                                                                                                               Length 236;
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 63, Application US/08996679
Patent No. 6169071
GENERAL INFORMATION:
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING
TITLE OF INVENTION: CELL ADHESION
NUMBER OF SEQUENCES: 63
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara Barbara D.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR REGULATING
TITLE OF INVENTION: CELL ADHESION
                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 48; DB 4; Length 17;
Pred. No. 0.43;
7; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/90£ 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                  DB 4;
                                                                                                                  Score 50.5; DB
Pred. No. 4.3;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 100086.401C1 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JABER: US/08/996,679
23-DEC-1997
                                                                                                                                                                                                                                                                       Sequence 14, Application US/08939853A Patent No. 6203788
                                                                                                                                                                                                                                  1 VIFNYK-GKNVLINKDIRCKDDEFTH 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Maki, Daivd J.
REGISTRATION NUMBER: 31,392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 63:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25.4%;
                                                                                                                  Query Match 26.7%;
Best Local Similarity 42.3%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 amino acids
amino acid
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Best Local Similarity 43.8
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |: :||::|:|
| IWKHKGRDVILKKDVR 16
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; MOLECULE TYPE: protein US-09-299-268-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-939-853A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TOPOLOGY:
US-08-996-679-63
                                                                                                                                                                                                                                                                                                                                                                                                               CS-08-966-679-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
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US-09-268-28
Squence 28, Application US/09299268
Squence 28, Application US/09299268
Squence 28, Application US/09299268
Squence 28, Application US/09299268
Squence 28, Application US-09299268
Squence 177687
Squence 100 Squen
                                                                                                                                                                                                                                                                                                                                                     Query Match 26.7%; Score 50.5; DB 1; Length 236; Best Local Similarity 42.3%; Pred. No. 4.3; Matches 11; Conservative 4; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 32606

COMPUTER READABLE FORM:
MEDIUM TYRE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/299,268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Saliwanchik, David R.
REGISTRATION NUMBER: 31,794
REFERENCE/DOCKET NUMBER: UF35.1.FWCC1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 904-375-8100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/901,127
FILING DATE: 1-JUL-1992
FILING DATE: 1-JUL-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/908,630
FILING DATE: 29-JUN-1992
CLASSIFICATION:
PRIOR APPLICATION NUMBER: US 07/342,212
FILING DATE: 21-APR-1992
CLASSIFICATION NUMBER: US 07/342,212
FILING DATE: 21-APR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            164 IINTYKEGDTISINIRLKCKDDIIKH 189
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INFORMATION FOR SEQ ID NO: 28:
SEQUENCE CHARACTERISTICS:
LENGTH: 236 amino acids
TYPE: amino acid
TELECOMMUNICATION INFORMATION:
                     TELEPANE: 904-375-8100
TELEFAX: 904-372-5800
INFORMATION FOR SEQ ID NO: 28: SEQUENCE CHARACTERISTICS: LENGTH: 236 amino acids TYPE: amino acid TYPE: amino acid TYPE: mino acid TYPE: protein US-08-307-499-28
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CITY: c.
STATE: Floric.
COUNTRY: U.S
TP: 32606
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Gaps

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us-09-828-000-7.rai

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GENERAL INFORMATION:
APPLICANT: Doherty, Patrick
APPLICANT: Blaschuk, Orest W.
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbard J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ADHESION MOLECULE
TITLE OF INVENTION: FUNCTION
FILE REPERENCE: 100086.403
CURRENT APPLICATION NUMBER: US/09/113,977C
CURRENT FILING DATE: 1998-07-10
NUMBER OF SEQ ID NOS: 87
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 68
LENGTH: 17
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  Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Description of Artificial Sequence:; OTHER INFORMATION: Synthesis
US-09-113-977C-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Lambowitz Dr., Alan M
APPLICANT: Lambowitz Dr., Alan M
APPLICANT: Mohr Dr., Georg
APPLICANT: Saldanha Dr., Roland
APPLICANT: Saldanha Dr., Roland
TITLE OF INVENTION: Method for Preparing Nucleotide
TITLE OF INVENTION: Integrase
WUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRINT APPLICATION DATA:
APPLICATION NUMBER: US/08/752,238
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  Mismatches
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NAME: GOLTICK, MATY E.
REGISTRATION NUMBER: 34,829
REFERENCE/DOCKET NUMBER: 24671/00103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                                                                                        US-09-113-977C-68
; Sequence 68, Application US/09113977C
; Patent No. 6277824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 3, Application US/08752238; Patent No. 5804418; GENERAL INFORMATION:
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43.8%;
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7; Conservative
                                                                      1 IWKHKGRDVILKKDVR 16
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                                          2 IFNYKGKNVLINKDIR 17
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1 IWKHKGRDVILKKDVR 16
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
Matches 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
US-08-752-238-3
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Matches
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APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPONIDS AND METHODS FOR MODULATING NEURITE OUTGROWTH
FILE REFERENCE: 100086.401C3
CURRENT APPLICATION NUMBER: US/09/115,395A
CURRENT APPLICATION NUMBER: US/09/115,395A
CURRENT FILING DATE: 1998-07-14
RARLIER FILING DATE: 1998-07-12
EARLIER FILING DATE: 1997-07-11
EARLIER FILING DATE: 1997-07-11
EARLIER FILING DATE: 1996-07-12
NUMBER OF SEQ ID NOS: 77
SOFTWARE: PATCHING DATE: 1996-07-12
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Pred. No. 0.43;
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CTHER INFORMATION: Synthesis
US-09-115-395-23
                                                                                                                                                COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: BY SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Varsion #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/939,853A
FILING DATE: 29-SEP-1997
CLASSIFICATION: 435
ATTORNEY/ACENT INFORMATION:
NAME: Maki, David 13.391
RECISTRATION NUMBER: 32,391
RECISTRATION NUMBER: 100086.402
TELEFONE: (206) 622-4900
TELEFONE: (206) 622-4900
TELEFONE: (206) 682-6031
INFORMATION POR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 amino acids
                                                          6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7; Mismatches
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Pred. No. (
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Best Local Similarity 43.8
Matches 7; Conservative
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                                                          STREET: 6300 Columb
CITY: Seattle
STATE: Washington
COUNTRY: USA
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Best Lagal Similarity
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APPLICANT: Guo, Hudtao
APPLICANT: Mohr, Georg
APPLICANT: Beall, Clifford J.
TITLE OF INVENTION: Methods for Cleaving Single-Stranded and
TITLE OF INVENTION: Double-Stranded DNA Substrates with Nucleotide
TITLE OF INVENTION: Integrase
FILE REFERENCE: 24671/04007
CURRENT APPLICATION NUMBER: US/09/257,770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
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                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Methods Cleaving DNA with Nucleotide ITTLE OF INVENTION: Integrases NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/031,897
                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Calfee, Halter & Griswold STREET: 800 Superior Avenue, Suite 1400 CITY: Cleveland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Docherty, Pamela A.
REGISTRATION NUMBER: 40,591
REFERENCE/DOCKET NUMBER: 24671/00105
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 44114
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPPRATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                      Sequence 7, Application US/09031897
Patent No. 6027895
GENERAL INFORMATION:
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                                                                                                                                                                                                                     APPLICANT: Mohr, Georg
APPLICANT: Zimmerly, Steven
APPLICANT: Guo, Huatao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Lambowitz, Allen M.
APPLICANT: Zimmerly, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (216)622-8416
TELEPRAX: (216)521 0816
INFORMATION FOR SEQ ID NO: 7
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                      APPLICANT: Lambowitz, Alan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : 599 amino acids
amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; MOLECULE TYPE: protein US-09-031-897-7
20 DDEFTHLYTLIVRPD 34
                       |: || || ::|||
20 DEVFTRLYRYLLRPD 34
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ADDRESSEE: Calfee, H
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20 DEVFTRLYRYLLRPD 34
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Matches 8; Conserv
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US-09-257-770-6
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                                                                                                                       US-09-031-897-7
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GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Mohr Dr., Georg
APPLICANT: Matsuura Dr., Roland
APPLICANT: Saldanha Dr., Roland
APPLICANT: Yang Dr., Jiam
APPLICANT: Zimmerly Dr., Steven
APPLICANT: Glomerly Dr., Huatao
APPLICANT: Beall Dr., Clifford J.
TITLE OF INVENTION: Mathods of Making an Rnp Particle
TITLE OF INVENTION: Having Nucleotide Integrase Activity
NUMBER OF SEQUENCES: 23
CORRESPONDER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     •; Pred. No. 45;
3; Mismatches
                                                                                                                                                                                                                                        Score 47; DB 1; Length 599;
Pred. No. 45;
                                                                                                                                                                                                                                                                                     4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTED READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: BM PC compatible

COMPUTER: BM PC compatible

COMPUTER: BM PC compatible

COMPUTER: BM PC compatible

SOFTWARE: PAECHIN Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/085,603B

FILING DATE:

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: CALFEE, HALTER & GRISWOLD LLP
STREET: 800 Superior Avenue
CITY: Cleveland
                                                                                                                                                                                                                                                                                     3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24671/04000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/09085603B Patent No. 6001608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 40,591
REGISTRATION NUMBER: 24,
TELECOMMUNICATION INFORMATION:
TELEPHONE: (216) 622-8416
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                        24.9%; 53.3%;
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53.3%;
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INFORMATION FOR SEQ ID NO: 3:
                                TELEFAX: (216) 241-0816
INFORMATION FOR SEQ 1D NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 599 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : 599 amino acids
amino acid
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Best Local Similarity 53.3.
                                                                                                                                                                                                                                           Query Match 24.9
Best Local Similarity 53.3
Matches 8; Conservative
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                                                                                                                              ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-752-238-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; MOLECULE TYPE: protein US-09-085-603B-3
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20 DEVFTRLYRYLLRPD 34
                     (316)
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COUNTRY: US
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US-09-085-603B-3
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Fatent No. 6040168
GENERAL INFORMATION:
APPLICANT: Greengard, Paul
APPLICANT: Greengard, Paul
APPLICANT: Rao, Hung-Teh
TITLE OF INVENTION: DNA ENCODING THE HUMAN SYNAPSIN III GENE
TITLE OF INVENTION: AND USES THEREOF
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 582;
                                                                                                                                                                                                         Score 47; DB 4; Length 599;
Pred, No. 45;
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                                                                                                                                                                                                                                                   4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/906,865
FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 26,742
RELEPHONE: 201-487-5800
TELLEPHONE: 201-343-1684
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
FRINCHEL SS AMINO acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSER: David A. Jackson, Esq.
STREET: 411 Hackonsuck Avo, Continental Plaza, 4th
STREET: Floor
CITY: Hackonsuck
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oucry Match 24.6%; Score 46.5; DB 3; I Best Local Similarity 36.7%; Pred. No. 52; Matches 11; Conservative 7; Mismatches 11;
                                                                                                                                                                                                                                               3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 YKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34
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CURRENT FILING DATE: 1999-02-25
                                                                                                                                                                                                      Query Match
Bent Local Similarity 53.3%;
Matches 8; Conservative
                                                                                                   TYPE: PRT; ORGANISM: Lactococcus lactis
US-09-257-770-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 582 amino acids
TYPE: amino acid
STRANDEDNESS: single
              NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 6
LENGTH: 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo suplens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: protein
DESCRIPTION: /desc
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20 DEVFTRLYRYLLRPD 34
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC COM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGINAL SOURCE
                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
US-08-906-865-3
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Gaps
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Pred. No. 40;
2; Mismatches 5; Indels
                                                                               GENERAL INFORMATION:
APPLICANT: Famodu, Layo O.
APPLICANT: Famodu, Layo O.
APPLICANT: Graceo, Buddy
APPLICANT: Rafalski, Antoni
TITLE OF INVENTION: Plant Aminoacyl-tRNA Synthetase
FILE REFERENCE: BB-1191
CURRENT APPLICATION NUMBER: US/09/352,990
CURRENT FILING DATE: 1999-07-14
EARLIER APPLICATION NUMBER: 60/092,866
EARLIER FILING DATE: July 15, 1998
NUMBER OF SEQ ID NOS: 29
SOFTWARE: Microsoft Office 97
SEQ ID NO 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search completed: January 9, 2002, 14:59:45 Job time: 72 sec
RESULT 15
US-09-352-990-16
; Sequence 16, Application US/09352990
; Patent No. 6255090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24.3%;
56.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
Best Local Similarity 50.4
Best Local 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1:1: || || || || 292 KDVIANKIKRCKTDSF 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 KNVLINKDIRCKDDEF 23
                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: PRT
; ORGANISM: Zea mays
US-09-352-990-16
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